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ANNUAL REPORT
OF THE
DEPARTMENT OF AGRICULTURE
OF THE
PROVINCE OF ALBERTA
FOR THE YEAR
1947

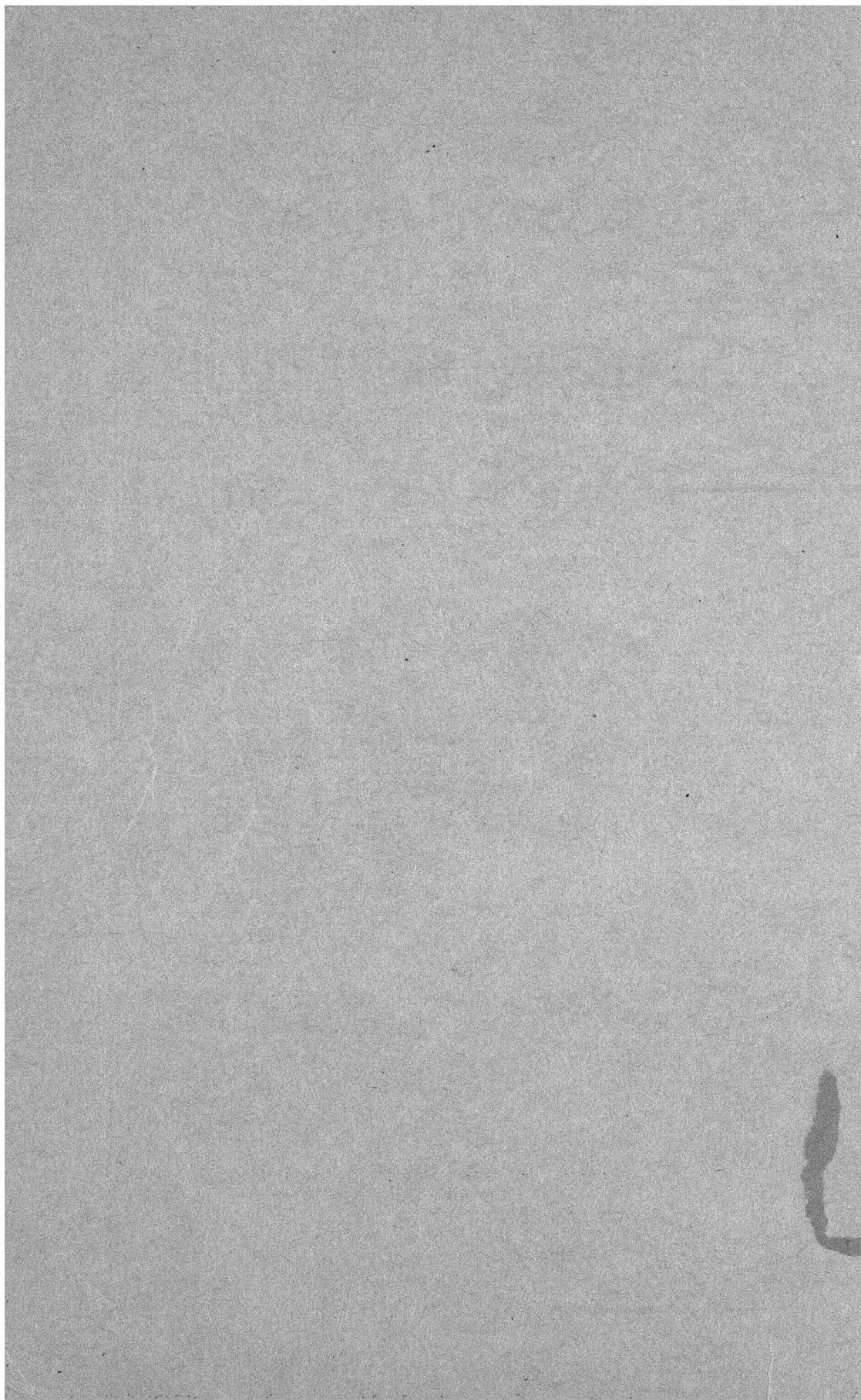


PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

EDMONTON:
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1948

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DEPARTMENT OF AGRICULTURE
1947

HON. D. B. MACMILLAN, *Minister of Agriculture*

Heads of Branches

- O. S. Longman, Deputy Minister.
- A. M. Wilson, Field Crops Commissioner.
- A. A. Campbell, Live Stock Commissioner.
- D. H. McCallum, Dairy Commissioner.
- Dr. E. E. Ballantyne, Director of Veterinary Services.
- Dr. G. S. Wilton, Acting Animal Pathologist.
- J. Keith, Fur Farm Supervisor.
- W. G. leMaistre, Provincial Apiarist.
- S. H. Gandier, Superintendent, Schools of Agriculture and Home Economics.
- F. N. Miller, Principal, School of Agriculture and Home Economics, Olds.
- C. W. Traves, Poultry Commissioner.
- R. M. Putnam, Director of Extension.
- N. N. Bentley, Principal, School of Agriculture, Vermilion.
- G. S. Black, Supervisor, Junior Activities and Youth Training.
- E. B. Swindlehurst, Acting Supervisor, Relief Settlement Branch.
- P. D. Hargrave, Superintendent, Brooks Horticultural Station.

To His Honour,
J. C. BOWEN,
Lieutenant Governor of the Province of Alberta.

SIR:

I have the honour to submit herewith the Report of the Department of Agriculture for the year 1947.

I have the honour to be, Sir,

Your obedient servant,

D. B. MACMILLAN,
Minister of Agriculture.

REPORT OF THE DEPUTY MINISTER

(O. S. Longman)

THE HONOURABLE D. B. MACMILLAN,
Minister of Agriculture.

SIR:

I have the honour to submit the forty-first annual report of the Alberta Department of Agriculture for the year ending December 31st, 1947.

The year 1947 was marked by a number of important developments which occurred as a result of the return of the national economy to peace time relationships. All wartime controls on rationing and ceiling prices of dairy products, and all subsidies on butterfat and cheese milk came to an end on or before June 9th, 1947. This action resulted in a number of readjustments, the chief of which was a marked increase in the price of butterfat and some increase in the price of other dairy products. On October 21st ceiling prices on oats and barley were removed and subsidies on wheat, oats and barley used for feed purposes were discontinued. At almost the same time it was indicated that the British wheat agreement would be re-negotiated at higher prices. The combination of higher grain prices and the withdrawal of price support for the live stock producer created consternation among all producers of live stock products, which resulted in a further swing to grain farming. This trend was not appreciably retarded by an increase of \$7.00 per cwt. in the price of export Wiltshire sides.

A further complication in the agricultural economy of this Province was introduced when the Dominion Government announced the details of the Geneva Trade Agreements and the austerity programme. Thus, while farmers entered the year under conditions of considerable stability, at the close of the year the future farm commodity price policy was somewhat obscure.

1947 was a year of extremes in so far as production was concerned. A late spring was followed by periods of drought or of over-abundant precipitation from district to district. A frost in late May slightly damaged crops over an extensive area, but on August 20th heavy frost seriously damaged crops in the Peace River. A wet, late fall retarded harvesting and caused general deterioration of grades. Hail damage was more severe than for many years.

Crop production was lower than in 1946, the decrease being most pronounced in wheat and oats. Barley production was higher, while more rye and flax were grown.

Marketings of nearly all classes of live stock declined, the most pronounced drop being in swine, which fell from 1,250,000 in 1946 to just over 1,000,000 in 1947. Marketings of cattle, calves and sheep dropped to a lesser degree. Dairy production increased by 2.5% over 1946 to reach a total of 1,699,993,000 lbs. of milk. Due to higher prices the value of dairy production showed a larger percentage rise.

The Poultry industry showed some increase despite considerable uncertainty which occurred when feed grain subsidies were removed.

Alberta beekeepers produced a record crop of honey in 1947.

The fur farming industry enjoyed a better year than was at first anticipated because of some strengthening in prices in the fall.

The services of the Department of Agriculture were expanded by the appointment of one additional District Agriculturist and two District Home Economists. E. Bruce Martin joined the staff of the Extension Branch on January 1st as Extension Engineer. The demand for the services of District Agriculturists and District Home Economists, and the need for bulletins, demonstrations and other forms of extension activity, remains high. There has been a growing demand for service in the field of agricultural economics, especially farm management, and for more agricultural statistics.

The Schools of Agriculture graduated the largest number of students in the Schools' history, 161 diplomas in agriculture and 75 in home economics. Current registration is 356 students. About 130 applicants were refused admission to the 1947-48 course because of inadequate accommodation. Greater use was made of the Schools during the summer months than heretofore. The resignation of F. S. Benn, instructor in English and Mathematics at Olds, on superannuation, occurred after twenty-seven years of service.

The chief staff change during the year was the retirement of Dr. P. R. Talbot, Provincial Veterinarian, on July 5th. Dr. Talbot resigned on superannuation after thirty-three years of faithful service to the public of the Province. On December 1st all veterinary services of the Department were consolidated in a Veterinary Services Branch, and Dr. E. E. Ballantyne was appointed as Director. During 1947 a start was made in the construction of a new Veterinary Laboratory on land acquired by the Department adjacent to the University Farm. It is expected that the new building will be ready for occupancy by mid-summer.

Late in the year the Department assumed its initial responsibility in the settlement of veterans on the Wanham project.

The Dominion-Provincial Farm Labour Service was continued throughout the year. Placement of another 300 Polish veterans in sugar beet work during early June and placement of these workers on general farms in November was the most important duty carried on under the agreement.

A problem of immediate concern is the lowering of quality of several important farm products. There has been a lowering in the grade of forage crop seed. The percentage of top quality hogs has decreased during the last few years, and top scoring butter is a smaller percentage of the make than has been the case in the past. The reason for this situation may be partially explained by a lack of efficient farm help, but it is also due to the fact that the production of lower quality products at present high prices yields satisfactory returns.

Following the decision of the Dominion Government to expend money in the erection of the St. Mary's dam for the conservation of waters of the St. Mary's River, involving 450,000 acres of land in Southern Alberta, there has been a definite renewal of interest in the possibilities of irrigation. Irrigation is going to be a phase of agricultural development peculiar to the Province of Alberta, and to which greater study will have to be given as time advances.

I submit detailed reports from the heads of the various Branches of the Department covering their operations during the past year. During the year the Province has suffered a loss in the death of a number of men who have played a prominent and constructive part in the agricultural life of this Province. Their passing is deeply regretted, but their lives were an inspiration to all those who knew them intimately. Of them I would mention: Mr. J. W. McIntyre, of the McIntyre Ranching Company, Magrath; Mr. S. G. Carlyle, former Alberta Live Stock Commissioner, Edmonton; Mr. Sam G. Porter, former Manager of the Department of Natural Resources, Canadian Pacific Railway, Calgary; and Professor Frank W. Wyatt, University of Alberta.

Yours respectfully,

O. S. LONGMAN,

Deputy Minister.

ANNUAL REPORT FIELD CROPS BRANCH

A. M. WILSON,
Commissioner

H. J. MATHER and W. LOBAY,
Soil Conservation
and Weed Control

J. E. BIRDSALL,
Crop Improvement

J. L. EAGLESHAM,
Crop Protection

Grain crops were seeded from a week to ten days later than normal. The heavy snows which occurred during the winter, with little melting until late March and early April, caused the delayed planting period. Wet soil and water-filled sloughs and hollows prevented early cultivation and seeding.

Delayed planting along with other inducements for farmers to grow barley and flax, resulted in substantial increases in each crop, with corresponding decreases in acreage of wheat and oats.

The acreage of flax was more than four times greater than the preceding year. This increase was due to a guaranteed price of \$5.00 per bushel in comparison with \$3.25 paid in 1946. All available carload quantities of flax suitable for seed remaining in country elevators when the March price announcement was made were cleaned to grade at Camrose and Edmonton and re-shipped to country points for planting. Re-cleaned flax was distributed for seed in Southern Alberta by the Alberta Linseed Oil Company, Medicine Hat. The barley acreage increased 32%. The late planting period together with a ceiling price increase from 64 $\frac{3}{4}$ ¢ to 93¢ along with a response from farmers for more barley resulted in an increase more than could be anticipated.

The areas planted to wheat and oats decreased by 5 and 8% respectively. The yield per acre of all crops was from 1 to 4 bushels below the long time average. Wheat was lower by 1.1 bushels, oats by 4.5 and barley by 3.2 bushels per acre. The following table shows the third estimate of acreage and yield of all crops in comparison with 1946 and the long time average yield.

	AREA		YIELD PER ACRE			Long Term		PRODUCTION	
	1946	1947	1946	1947	avge.	1946	1947	1946	1947
ALBERTA									
Wheat	6,747,000	6,410,000	18.8	16.1	17.2	127,000,000	103,000,000		
Oats	2,754,000	2,534,000	35.2	29.6	34.1	97,000,000	75,000,000		
Barley	1,783,000	2,354,000	26.8	22.1	25.3	48,000,000	52,000,000		
Fall rye	155,000	197,000	15.0	14.7	13.5	2,325,000	2,900,000		
Spring rye	59,000	131,000	10.2	10.3	11.9	602,000	1,850,000		
All rye	214,000	328,000	13.7	13.0	12.9	2,927,000	4,250,000		
Peas dry	19,000	18,500	16.5	12.0	14.3	314,000	222,000		
Beans, dry	400	100	15.0	15.0	13.3	6,000	2,000		
Mixed grain	25,100	16,300	29.0	22.0	26.9	728,000	359,000		
Flaxseed	62,000	257,000	10.2	8.4	8.0	635,000	2,150,000		
Potatoes	26,300	24,500	cwt.	cwt.	cwt.	cwt.	cwt.		
			78.0	80.0	82.7	2,051,000	1,960,000		
			tons	tons	tons	tons	tons		
Hay and Clover	637,800	696,500	1.60	1.40	1.38	1,020,000	975,000		
Alfalfa	219,700	223,500	2.10	2.00	2.21	461,000	447,000		
Fodder corn	700	900	4.00	4.20	4.22	3,000	4,000		
Grain hay	882,000	850,000	1.75	1.50		1,544,000	1,275,000		
Sugar beets	29,800	29,200	12.92	12.52	11.1	385,000	365,500		

The crop season was marked by a late cool spring, severe frosts in late May, dry weather in July, and a delayed threshing season due to wet weather. During the last week of May, frosts ranging from a few degrees to as much as 20 degrees occurred over almost the entire crop area. Grain was frozen to the ground

and although heavy damage was expected, particularly to barley crops, little actual loss occurred. Following the frost, cool damp weather prevailed which may have had considerable bearing on the recovery of the crops. Flax which had reached the four-leaf stage or more was most severely damaged and some fields had to be replanted to barley crops.

During June and July ideal growing conditions prevailed except in the Peace River block, where dry weather had continued since early Spring. Crops in the south-eastern section of Alberta deteriorated rapidly during the latter part of July. This dry weather extended over most of central Alberta and considerably reduced yields of the late sown crops. The Peace River crop suffered from dry weather up until early July and from too much rain for the remainder of the season. During the week of August 20th, frosts were general over this same area of the north. The quality of wheat was lowered to No. 4, 5 and 6 grades, and oat germinations were made questionable on every farm.

Hail did more damage in 1947 than for several years. Greatest losses were suffered in areas extending east and west through Edmonton. These hail strips occurred at various times and covered almost the entire width of the province. Several strips up to five and six miles wide, cut east and west through farmers' crops from Leduc to Castor on the south, and from Legal to Vegreville and Vermilion on the north.

Because of drought and hail approximately 400 townships will be declared eligible for payment under the Prairie Farm Assistance Act. The greater proportion of payments will again be made to farmers operating in the Special Areas whose crops dried out early in July.

The higher general price levels of grain resulting from the removal of price ceilings from oats and barley on October 22nd, 1947, along with the re-negotiated price of 1948-1949 wheat at \$2.00 per bushel under the British Wheat Agreement has given increased stimulus to grain production and has upset the balance with livestock so necessary in planned farming with a view to stability and permanency of farm enterprise.

CROP IMPROVEMENT SERVICE
(J. E. BIRDSALL)

Forage Crop Encouragement Policy

Forage crops are essential to the establishment of a permanent type of agriculture in this Province. They are required for soil conservation and improvement, for weed control, and for livestock production. Promotional work by the Field Crops Branch over a period of years has helped to bring about a great increase in their use. Their value is appreciated now more than ever before and so a continued increase in acreage is anticipated.

The distribution of forage crop seed under a government policy has been justified by the fact that it served as an effective means of promotion and because adequate retail outlets were not provided by other organizations. The great increase in the use of these crops has reduced the need of promotion in some districts. For this reason a plan was adopted in 1947 of the Department's withdrawing the distribution policy from any area in

which there was full assurance that seed of high quality would be held and distributed by other agencies. As a result the Alberta Seed Growers' Co-operative undertook to service territories at Wetaskiwin, Thorsby, Westlock, Falher, Berwyn and part of the Spirit River district. The balance of the Peace River district was served by the Peace River Seed Growers' Association. This arrangement worked well and will be extended in 1948.

The Forage Crop Encouragement Policy in operation during 1947 established a reserve of grass and legume seeds for Alberta farmers and provided readily available seed ordering and delivery facilities. The seed was sold at cost price, freight prepaid. At 162 strategically located points, facilities for seed ordering and distribution were established. Export prices for forage seeds were unusually high and demand keen. This made it extremely important that seed be reserved for domestic requirements.

A summary of Seed Distribution for the years 1942 to 1947 (inclusive) is as follows:

	Pounds of Seed Distributed						Price
	1942	1943	1944	1945	1946	1947	1947
Alfalfa	92,238	143,323	161,000	170,435	219,130	130,030	49c
Red Clover	7,450	12,095	8,925	28,645	72,782	47,650	53c
Alsike Clover	6,450	13,089	26,200	35,464	50,687	31,650	52c
Sweet Clover	26,185	75,759	85,000	116,890	134,962	169,898	13c
Alsike-Timothy Mixture	3,115	3,486	6,000	10,982	9,259	15,300	28c
Timothy	12,690	37,003	40,000	39,190	44,575	41,756	12c
Crested Wheat Grass..	41,225	53,640	44,436	44,035	47,621	24,800	18c
Red Fescue .....	.....	1,404	2,000	1,753	5,735	4,441	72c
Brome	68,253	163,706	152,000	161,845	174,275	166,305	21c
Alfalfa-Sweet Clover Mixture .....	.....	.....	.....	6,785	4,970	4,587	30c
Miscellaneous	340	550	220	5,807	891	263	.....
Total	263,936	504,055	525,781	622,456	764,917	636,680	

While less seed was distributed under the policy in 1947 than in 1946, the total distribution, including seed distributed by seed growers' organizations, was increased to well over one million pounds. This is a large quantity of seed but is only a fraction of the amount that would and should be used if a permanent type of farming was adopted by all farmers in the Province.

Alfalfa, brome and sweet clover are in greatest demand. They are grown in most sections of the Province. Crested wheat is confined mainly to the drier open prairie sections where it is a valuable hay and pasture crop, and is used in range reclamation. A much larger distribution of crested wheat grass seed would have been made if it had been available but there are few growers and an unfavorable season in 1946 cut the supplies to a very low level. A very keen demand for alsike and altaswede clover seed developed in the black and grey soil areas of central and northern Alberta, where they are gaining importance for seed production. A shortage of high quality alsike seed limited the amount that could be distributed. Timothy continues to be in demand in areas where moisture is ample. Creeping Red Fescue is gaining in importance as a seed crop and with the lower prices which obtained in the fall of the year it should become a very popular pasture grass in many sections of the province. In conjunction with seed distribution the Field Crops Branch has stressed the importance of proper legume inoculation, careful seeding and management practices, and the use of grass-legume mixtures for forage purposes. To ensure the inoculation of legume seeds, tins of nitro-culture were placed in all sacks of seed distributed. Farmers in districts suitable for seed production have been supplied with the best seed obtainable.

Forage Crop Testing Policy.

In past years part of the cost of forage crop seeds for distribution was absorbed by the Department of Agriculture. There is no longer any necessity for this with respect to seed distribution generally. However, in some legume seed growing areas it is considered advisable to assume part of the cost of seed in order to promote seed production, and the use of good seed of a recommended variety in establishing stands for seed production. Such assistance is also beneficial in encouraging farmers to try out kinds and varieties of grasses and legumes not previously grown in their districts.

Under the terms of the Policy, the Department undertook to provide a maximum of 50 pounds of seed to a farmer, on the recommendation of the District Agriculturist, at part cost. Only one kind of seed could be obtained by a farmer and he agreed to supply the Department, on request, with detailed information relative to the crop produced.

Under this Policy 555 pounds of registered Grimm, 950 pounds of registered Ladak and 1,085 pounds of registered Ferax alfalfa were distributed. In addition, 1,925 pounds of registered altaswede, 584 pounds of certified alsike and 981 pounds of registered Creeping Red Fescue were distributed. There were 144 farmers who took advantage of the policy.

Field Peas Encouragement Policy.

The acreage of field peas in Alberta reached a high point in 1945, dropped considerably in 1946, and was slightly lower in 1947. Production of this crop is mainly confined to the black and grey soil zones. Peas have a place in the cropping programme of farming areas where a rotation is followed that permits them to be grown on land that is comparatively free from weeds. They are usually grown as a seed crop but could be used more extensively (and to advantage) as a high protein live stock feed. In order to obtain information with respect to the place of peas on Alberta farms the Field Crops Branch shared the cost of supplying four-bushel lots of seed to each of eighteen farmers, who entered into an agreement to pay approximately half the cost of the seed, to adopt recommended seeding and harvesting practices and to report the results obtained. Thirteen farmers were supplied with the variety Early Blue and five with Chancellor.

The production of seed peas by farmers under contract with seed firms continued. The total acreage showed some increase.

Forage Crop Seed Production.

During the past few years there has been a great increase in legume seed production and also in the production of brome grass and creeping red fescue seed. There has been a steady decrease in the production of timothy and of crested wheat grass seed. In 1947 the same general trends were in evidence. Substantial increases were made in the case of alsike and red clover seed. Alfalfa seed production was down, while sweet clover and brome remained unchanged. The production of creeping red fescue, which was low in 1946 as a result of drought in the

Peace River area, was up, although it did not reach the high level attained in 1945.

The following figures give the estimated production in Alberta of the most important forage seed crops:

	1937-42 Lbs.	1943 Lbs.	1944 Lbs.	1945 Lbs.	1946 Lbs.	1947 Lbs.
Alfalfa	684,000	1,450,000	2,500,000	4,000,000	3,500,000	2,500,000
Sweet Clover	831,000	1,500,000	4,000,000	4,000,000	5,000,000	5,000,000
Red Clover	182,000	450,000	475,000	1,800,000	850,000	1,500,000
Alsike	180,000	200,000	500,000	1,200,000	1,000,000	2,000,000
Timothy	958,000	1,000,000	1,200,000	1,000,000	750,000	200,000
Crested Wheat	308,000	300,000	250,000	200,000	100,000	75,000
Brome	2,042,000	4,000,000	4,000,000	4,000,000	4,500,000	4,500,000
Creeping Red Fescue....	53,000	190,000	300,000	850,000	250,000	600,000

Forage seed prices appear to have reached a post war peak in 1946 as a downward trend started in the fall of 1947. This situation serves to emphasise the importance of producing pure seed of high quality. With lower prices, low quality seed and mixtures will not be profitable or may prove unmarketable. Conversely, high quality seed is likely to continue to give satisfactory returns to the grower.

Forage seed harvesting continues to present many problems and requires further study. Studies of alsike harvesting methods carried out in 1945 and 1946 were to have been continued in the fall of 1947 but inclement weather made this impossible.

With the increase in forage seed production marketing facilities have expanded. Seed companies operating in the province have increased in numbers and existing companies have expanded. Seed growers' co-operatives have also expanded their facilities. The Alberta Seed Growers' Co-operative, with its affiliated district associations, operates a large, well-equipped seed cleaning and warehousing establishment at Camrose. Twenty-three smaller warehouses, of the co-operative, for assembling seed shipments were in operation at other points in the province. In the fall of 1946 this co-operative instituted a policy of establishing Field Superintendents, at points where the volume of business warranted such expansion. In 1947 Field Superintendents were in charge of buying and selling seed for the co-operative at Thorsby, Westlock, Falher and Peace River. In the fall of 1947 a fifth Superintendent, with headquarters at Red Deer, joined the organization. Other co-operatives located at Grande Prairie and at Pincher Creek provided seed cleaning and marketing services to seed growers in their respective areas.

Distribution of Seed Grain to Areas of Shortage.

Crop losses from hail, frost and drought were not severe in 1946; nevertheless it became necessary to distribute seed of oats and barley to several points in the province. The main area of shortage centred on Vermilion, where frost severely affected the germination of these crops. Other small areas were affected by hail and frost to the point where seed had to be shipped in. In the Camrose and Rley areas shortages were relieved by the operation of cleaning plants under the direction of the Agricultural Service Boards. District Agriculturists enlisted the co-operation of Agricultural Service Boards and elevator agents in meeting local seed problems. Farmers placed orders with elevator agents, where local supplies were inadequate and carloads were shipped from the better seed areas.

Grain elevator companies and seed handling organizations filled all car-lot orders for oats, and in nearly all instances supplied graded seed. In the case of barley these organizations supplied part of the requirements; the Canada Malting Company supplied several carloads and the balance was taken care of by the Field Crops Branch. In order to meet this situation, barley, both cleaned and uncleaned, of suitable quality was purchased by the Department. The cleaned barley was shipped from points of origin to areas of shortage. The uncleaned barley was shipped to the Dominion Government Elevator, Edmonton, where it was cleaned and reshipped or sold in L.C.L. lots from the elevator. Olli, Newal and Titan were the varieties in demand. The total distribution by the Field Crops Branch was as follows: Olli, 54,725 bushels; Newal, 10,411 bushels; Titan, 2,400 bushels; making a total of 67,536 bushels.

Production and Sale of Registered and Certified Seed.

The unusually large crop of registered and certified seed grain produced in 1946 was practically all marketed by June, 1947. The 1947 crop established new records for total production and at the end of the year indications were that with the possible exception of certified grades of some oat varieties, a market would be found for practically all the seed that would qualify. Wheat was being marketed in Europe, while oats and barley were going to eastern Canada and the United States. Seed flax found a ready market within the province. Prices of all kinds had reached higher levels than had been known since the post war period following World War I.

While an interest, on the part of farmers, in the production of pure seed is to be commended, the expansion that took place in 1946 and 1947 is abnormal and could result in lasting harm to the business of seed production. At the end of 1947 large quantities of registered seed had been purchased or ordered by Alberta farmers. This can only mean even greater production in 1948, with no large assured market.

In the following tables a summary is given of crops inspected for registration and certification over a three-year period.

REGISTERED SEED (CEREALS)

Kind of Seed	Number of Fields Inspected			Acreage			Est. Yield (Bus.)		
	1945	1946	1947	1945	1946	1947	1945	1946	1947
Wheat	181	427	914	8,439	18,486	33,620	203,903	380,460	843,244
Oats	449	603	1026	12,640	19,476	23,745	555,397	1,095,764	1,414,056
Barley	148	171	347	2,609	4,530	6,877	95,313	189,575	255,015
Peas	1	3	6	3	2½	58	100	18	
Flax	20	60	150	865	2,068	4,698	10,305	24,233	51,920

REGISTERED SEED (FORAGE CROPS)

	Number of Fields Inspected			Acreage			Est. Yield (lbs.)		
	1945	1946	1947	1945	1946	1947	1945	1946	1947
Alfalfa	128	231	434	2,698	4,739	9,029	444,400	674,933	.....
Brome	3	4	3	224	184	56	17,900	30,400	6,890
Creeping Red Fescue	5	8	7	38	110	168	1,550	20,300	.....
Crested Wheat	2	1	1	57	11	11	10,000	2,000	750
Red Clover	6	4	8	34	40	125	6,125	6,750	.....
Sweet Clover	1	.....	.....	25	.....	.....	2,500	.....	.....

CERTIFIED SEED (CEREALS)

	Number of Fields Inspected			Acreage			Est. Yield (Bus.)		
	1945	1946	1947	1945	1946	1947	1945	1946	1947
Wheat	9	24	68	423	2,383	3,163	11,550	61,799	68,425
Oats	95	61	174	5,283	1,121	5,200	233,275	77,275	305,368
Barley	33	44	169	1,230	995	3,220	49,395	42,949	137,374
Flax	11	10	27	468	141	724	4,394	2,040	6,631
Rye .....	.....	1	1	.....	5	.....	.....	100	70

CERTIFIED SEED (FORAGE CROPS)

	Number of Fields Inspected			Acreage			Est. Yield (Lbs.)		
Alfalfa	26	20	21	550	427	678	83,600	109,958	.....
Brome	145	166	176	6,699	11,160	11,452	1,198,500	1,781,289	1,385,610
Creeping Red Fescue	26	28	58	1,205	1,597	2,890	280,050	322,770	374,825
Crested Wheat	2	.....	6	53	.....	325	3,150	.....	.....
Red Clover	3	.....	12	14	.....	253	2,500	29,500	.....
Sweet Clover	1	4	12	25	100	374	.....	.....	.....

It will be noted that with the exception of alfalfa, no upward trend in production took place in the case of forage crops. Since there is no recognized variety of alsike, it is not eligible for registration or certification. However, an effort is being made to make pure seed of this clover available through field and seed inspection. Seed coming up to certified standard is sealed as "Field Inspected".

The Alberta Crop Improvement Association.

This Association has concerned itself particularly with the problem of encouraging the wider use of registered and certified cereal grains for the purpose of maintaining or improving the quality of commercial grain. Through the co-operation of grain companies and the Alberta Seed Growers' Co-operative, arrangements were made whereby grain elevator agents were authorized to accept farmers' orders for registered and certified seed. An adequate supply of seed of most varieties was available, making a large distribution possible.

The Association is directed by a committee which represents the North-West Line Elevators' Association; the farmer-owned elevator companies; the Plant Products Division, Dominion Department of Agriculture; the Alberta Seed Growers' Co-operative; the Canadian Seed Growers' Association (Alberta Branch); the University of Alberta; and the Alberta Department of Agriculture.

Registered and certified seed grain marketed through the Alberta Crop Improvement Association in 1947 in comparison with previous years was as follows:

	1941 Bus.	1942 Bus.	1943 Bus.	1944 Bus.	1945 Bus.	1946 Bus.	1947 Bus.
Wheat	16,000	5,961	3,000	9,232	20,014	23,728	35,179
Oats	99,000	34,659	10,500	16,011	11,670	26,560	35,235
Barley	4,500	4,349	2,500	6,579	2,450	15,492	23,972
Flax	.....	868	.....	1,215	328	1,194	11,321
Rye	.....	.....	.....	.....	.....	208	346
	119,500	45,837	16,000	33,037	34,462	67,182	106,053

A great deal of credit is due to grain companies and elevator agents for the success of this policy of seed distribution. The growers themselves co-operated reasonably well in having seed cleaned, sacked and sealed as early as possible as well as by filling orders promptly. It should be noted too that farmers who marketed wheat as registered or certified seed did not receive the benefit of payments made by the Wheat Board on producers' certificates.

It is of interest to note at this time the great increase in price of seed grain in the fall of 1947. The following table summarizes the price per bushel of registered Number 1 seed grain over a three-year period.

	1945-46	1946-47	1947-48
Wheat	\$2.25	\$2.35	\$4.50
Oats	1.70	1.60	2.50
Barley	1.80	1.80	3.00
Flax	4.70	7.00	8.00

These prices covered all costs of seed, including freight prepayment to any railway point in Alberta. The prices given for 1947-48 obtained at the end of the year but were subject to change if market conditions warranted. These high prices were in effect because there was a strong export market for registered and certified seed. Under these circumstances domestic prices were controlled by prices in effect on export markets.

The Canadian Seed Growers' Association (Alberta Branch).

Regional branches of the Canadian Seed Growers' Association have as their main function the dissemination of information, relative to seed growing to all growers of registered seed in the area being served as well as endeavouring to make farmers better-grain conscious, through the use of registered seed. As this is a crop improvement programme and the Alberta Branch endeavours to serve the entire province, the Supervisor of Crop Improvement, a member of the staff of the Field Crops Branch, acts as secretary.

In 1947 the programme of the branch included field days at Brooks, Airdrie, Lacombe, McLennan, Fairview and Beaverlodge. In addition, a January meeting was held in Calgary with the National Secretary, Mr. W. T. G. Weiner, as special speaker. A July meeting was also held at Camrose. Four circular letters were prepared and mailed to growers during the winter and spring months and a mimeograph entitled "Practical Hints for Growers of Registered and Certified Seed" was made available to anyone requesting it.

All meetings were well attended, with the exception of the one at Brooks. The Lacombe field day was considered the annual meeting. At this meeting the system of regional field days was approved and the executive was instructed to arrange another series in 1948.

The two dollar membership fee put into effect in 1947, though voluntary, was paid by 601 members. This put the branch on a sound financial basis and made it possible to carry out its work without financial embarrassment.

The secretary gave two radio talks during the year, dealing with registered seed grain, and in October, when it appeared that a large proportion of the seed in the province would go for export, before Alberta farmers were supplied; the branch paid for four spots over each of six radio stations. These spots were for the purpose of warning farmers that seed should be ordered immediately. The response was satisfactory.

The following table gives total membership of the Canadian Seed Growers' Association and the membership in Alberta for the years 1938 to 1946 inclusive:

Year	Alberta	Canada	Alberta in % of Canada
1938	438	2805	15.6
1939	344	3046	11.3
1940	349	3491	10.0
1941	315	3035	10.4
1942	274	2637	10.4
1943	244	2523	9.7
1944	340	2586	13.1
1945	522	2731	19.1
1946	756	3402	22.2

The membership in 1938 was the highest up to that time. It fell off in Alberta during the ensuing four years but began

to increase again in 1944, increased considerably in 1945 and 1946, and field inspections indicate that a much higher figure was probably reached in 1947. The rapid increase in the past three years may be accounted for by the attractive prices paid for registered seed grain for export, widespread interest in the production of legume seeds in the grey and black soil zones, and the improved financial status of the average farmer. When money is plentiful more farmers will pay extra for good seed. The membership for Canada, as a whole, has not changed greatly from year to year. It is not expected that Alberta growers will continue to produce on the present scale. The boom in seed business during the past three years has, however, served to make farmers seed-conscious. It is hoped that this may mean a larger domestic market, should the export market decrease or disappear.

The Alberta Varietal Zonation Committee:

The purpose of this committee is to co-ordinate the findings of the various experimental agencies in the province and to recommend the varieties of field crops best suited to the different agricultural zones. The committee is composed of representatives of the following: Department of Plant Science and Department of Soils, University of Alberta; Provincial Field Crops Branch; Provincial Schools of Agriculture; Dominion Experimental Farm Service; Plant Products Division, Dominion Department of Agriculture; Dominion Laboratory of Plant Pathology, Edmonton.

The recommendations of this committee were printed in bulletin form by the Field Crops Branch and widely distributed throughout the province.

A sub-committee on peas set up in 1944 continued to function. The committee arranged for the testing of six varieties of peas by the Dominion Experimental Stations in the Province, and the University of Alberta, as well as by the Olds and Vermilion Schools of Agriculture. Results for three years have been obtained. As these were very consistent and as it did not appear desirable to test other varieties it was decided to discontinue the project.

Provincial Junior Grain Show:

The annual provincial Junior Grain Show was held in conjunction with the Calgary Board of Trade Seed Fair and Agricultural Short Course at the Victoria Park Stadium, Calgary.

The top three samples from each of 69 grain clubs in the Province competed in the junior club classes.

In the open classes competition was open to all Alberta farm young people between the ages of 12 and 22 (inclusive).

There were 126 entries in the four open classes and the quality of the exhibits was high. A class was provided for representative samples of bulk lots of cleaned seed of malting barley. Samples for the competition were drawn by District Agriculturists. There were five entries in this class. In order to encourage entries from new exhibitors special prizes were offered. It was gratifying to note a large number of the exhibits were from new exhibitors.

A total of 338 samples of grain were on display in the junior show. They drew the attention of a large number of interested

spectators. A portion of these were again displayed at the Edmonton Short Course in February.

PRODUCTION OF SPECIALTY CROPS

Soft White Spring Wheat:

Soft white wheat, which is used for making pastry flour, was first grown in Alberta about 1930. A flour mill in southern Alberta had a small acreage grown under contract in the irrigation area. There was no variety at that time sufficiently early maturing to be grown in central or northern Alberta.

More recently new varieties introduced from the United States and tested by the University of Alberta and milling companies have proven satisfactory in more northerly areas and have greatly out-yielded our best varieties of hard, red spring wheat. At the present time the variety Lemhi is considered to be the best of these. A relatively low protein content is required for pastry flour. Lemhi is very good in this respect when grown under irrigation or on grey soil.

It appears that there is a potential market for about 1½ million bushels of this crop grown in Alberta and it would appear that 50,000 acres would produce enough to supply that market. Since there is no general market for the crop, farmers in adapted areas should only grow it under contract with one of the milling companies.

There were 25,000 acres seeded to soft white spring wheat in 1947. About 1,500 of this was on grey soil west of Edmonton and the balance under irrigation in the Duchess-Tilley-Brooks area.

Mustard Seed:

Mustard seed has been grown successfully under dry land conditions in southern and eastern Alberta for several years. Since the market for it is limited it has all been grown under contract with commercial firms.

Two kinds of mustard seed are being grown, yellow and brown. Yellow is the main crop but the trend is to brown as it yields more and is therefore more profitable, though lower in price per pound. Total acreage was slightly over 40,000 acres in 1947. This was distributed over about 400 farms. Most of these were in the Lethbridge and Warner districts. Average yield per acre was approximately 300 pounds. The total production was between twelve and fifteen million pounds and the returns to farmers would be close to one million dollars.

SOIL CONSERVATION AND WEED CONTROL

H. J. MATHER

W. LOBAY

Soil Conservation.

The abundant moisture in the spring of 1947 prevented soil drifting from becoming a serious problem during that period. During October, however, soil drifting reached extremely serious proportions in the Peace River country and continued intermittently throughout the late fall in Northern and Central Alberta.

The insidious encroachment of water erosion was apparent from early spring until late fall. The spring run off, while not heavy, carried away an increasing toll, while the torrential type of rainstorm common throughout the summer left obvious scars on most unprotected fields. The appearance of gullies as the successor to sheet and rill erosion was all too apparent.

As an indication of the seriousness of the problem and the increased interest being taken in preventing soil erosion, many requests for advice and assistance in controlling erosion were received at this office.

While the demand for information in gully control was great, it was possible in only one instance to obtain the necessary equipment to carry out a demonstration. The Agricultural Service Board of the Municipal District of Eagle arranged to make available municipal road building equipment to fill in one gully as a demonstration. This gully was 660 feet long, varied in depth from two feet to six feet, and in width up to 36 feet.

Prior to filling the gully, levels were run in order to assure a uniform slope and a wide flat bottom. This type of bottom is necessary in order to spread the flow of water and lessen its speed and thus prevent further erosion.

In completing this project, a bulldozer was used for two hours and a speed patrol for three hours. The total cost was surprisingly low, being only \$26.25.

After the filling and levelling was completed, the water course was seeded to a mixture of grasses and legumes, with a light seeding of fall rye. Unfortunately, other municipalities could not make equipment available due to the heavy demand for it in road construction.

While equipment with which to carry on further gully filling demonstrations, was not available, farmers were encouraged to seed down natural waterways to grass in order to prevent the formation of gullies on their farms. In this connection over 1,000 lbs. of grass seed were supplied for supervised demonstrations. Field days were held at some of the projects. The value of these demonstrations was apparent in that many farmers purchased seed to carry on similar work.

The value of trash cover was demonstrated at field days and the importance of this type of protection was stressed as a means of preventing soil erosion.

The importance of forage crops in maintaining soil fibre and restoring fertility was demonstrated through field trials, most of which were in connection with weed control demonstrations. In addition to the more general soil conservation work, projects have been commenced in demonstrating a better utilization of some problem soils. These consist of trials of forage crops on solonetz and unproductive lake bottom soils.

The results of these tests were very gratifying in 1947, as excellent stands of forage were established on areas which previously had been extremely unproductive.

Colored pictures of erosion problems and control measures adopted were taken by the field staff during the summer. This material is available in the form of slides as visual aids in carrying out the extension program during the winter months.

Weed Control:

A cold wet spring followed a winter of heavy snow in 1947. Seeding was delayed because of wet weather and the low temperature retarded growth. As a result, weeds obtained a firm foothold in many fields early in the season. This competition remained throughout the season and caused heavy crop losses.

Moisture conditions were fair until the end of June. From this time onward rains were chiefly of a local nature and many crops were seriously reduced in yield because of lack of moisture and competition from weeds.

Demonstration fields continue to be one of the important features of the weed control program in 1947. In view of the fact that a great deal of valuable information had been obtained from this type of project in preceding years, and because of the keen demand from Agricultural Service Boards for an expanded program of this nature the number of demonstrations was greatly increased in 1947. In addition to 21 extensive field trials with 2,4-D and cultural practices carried out by members of the headquarters staff, 231 similar projects in co-operation with the Agricultural Service Boards were carried to a successful conclusion. The field trials were designed to obtain information on the control and eradication of wild oats, wild mustard, tartary buckwheat, and other annuals, as well as couch grass, Canada thistle, sow thistle, hoary cress, leafy spurge, Russian knapweed and toad flax.

In making possible the above program it was necessary for this office to secure and distribute 400 bus. Olli barley, 7,500 pounds of forage seed, 6,400 pounds of fertilizer and 46 gallons of 2,4-D. Because of the lack of spraying equipment, it was necessary for this department to be responsible for the application of 2,4-D on all projects. In this connection it was necessary to remodel the 1946 equipment for use with 2,4-D. A thirty-foot boom equipped with low pressure, low gallonage nozzles, was attached to the Hardie sprayer which was mounted on a truck.

Field days were held in connection with many of the projects in order that farmers might observe the effects of various chemical treatments and cultural practices.

During the growing season, colored pictures were taken on many projects by local District Agriculturists and Field Supervisors in order that they might have pictorial evidence of the efficiency of various methods of weed control at their winter meetings.

In order to obtain complete information for presentation at winter meetings yield data were obtained from all projects. This entailed the harvesting and threshing of 800 square-yard samples and performing statistical analysis of yield data. Mimeo-graphed copies of these results are available to the public.

As in former years, late seeding of Olli barley, particularly with fertilizer, gave excellent results in control of wild oats in the demonstration fields. In one instance there was a 17.8 bu. increase over the field receiving normal treatment.

Late seeding of Olli barley on tartary buckwheat infested land again proved effective. The percentage of buckwheat in the threshed samples was reduced very significantly where

this practice was followed. While 2,4-D did not completely eradicate tartary buckwheat in the growing crop, in most instances the plants produced few seeds and were reduced in height sufficiently that only a few seeds were harvested with the crop.

As an example on one field where the untreated and treated areas both yielded 26 bus. per acre, the barley from the untreated portion contained 6.6 bus. of tartary buckwheat per acre, while the barley from the treated area was almost entirely free from tartary buckwheat seeds.

In a similar test on the control of smartweed, the untreated area yielded 40 bus. per acre, of which 3 bus. were smartweed seeds. The treated area yielded at approximately the same rate and contained only one half bushel of smartweed seeds per acre.

Because of the rapid spread of wild mustard throughout central Alberta, several demonstrations were laid down on fields infested with this weed. Cultural practices continued to give a reasonably good control. However, the effectiveness of 2,4-D on this weed tends to supersede cultural methods and points to the possibility of complete eradication if annual applications are applied for a few years.

Early seedings of Olli barley followed by thorough fall cultivation was again effective in eradicating Canada thistle and sow thistle. 2,4-D trials on these weeds showed that the top growth could be destroyed, the competition with the grain crop eliminated, at least for one season, and the formation of seed prevented. Further work is required in order to determine the possibilities of eradicating such weeds with repeated annual applications.

Fall rye, following a season of summer fallow, has proved successful in eradicating Canada thistle, sow thistle and couch grass. Fall rye also greatly suppressed infestations of hoary cress and, where 2,4-D was used in conjunction with it, almost eliminated this weed.

One field infested with Russian knapweed, partly in crop and partly in fallow, was treated with 2,4-D. No regrowth occurred in the cropped area, while some twenty per cent regrowth occurred on the fallow area. This illustrates the effectiveness of crop competition as an aid in weed control.

Applications of 2,4-D to leafy spurge resulted in a complete burning of the top growth and a destruction of the roots to a depth of six to eight inches. Below this depth the roots were normal and produced regrowth. No seed was formed on treated plants. Repeated applications might effect eradication.

Fall rye as a competitive crop has some effect in suppressing the growth of toad flax. 2,4-D used in conjunction with fall rye showed some promise in one instance. Generally speaking, however, preliminary trials indicate that this weed is highly resistant to 2,4-D. A long-range program has been designed and more conclusive evidence will be reported in the future.

The use of 2,4-D as a selective herbicide for controlling weeds in cereal crops was of paramount interest in the spring of 1947. In order to demonstrate the value of this chemical and to assess the efficiency of various methods of applications

a total of 21 demonstration fields were laid down. These included tests with various formulations of 2,4-D at different rates of application, both in the liquid and dust forms. Various machines, including a low pressure, low gallonage boom sprayer, Buffalo Turbine and Niagara Duster were used.

While the results obtained varied somewhat, they proved conclusively that 2,4-D applied in correct dosages and at the proper stage of growth is a valuable aid in the control of many troublesome weeds.

Spraying with the low pressure, low gallonage boom type sprayer had many advantages over dusting, both in ease and efficiency of application and in weed kills obtained.

About 4,000 acres of grain were sprayed by aeroplane in the province in 1947. The results obtained compared quite favorably with work done by ground equipment.

In comparing the results from various formulations, it was apparent that the ester type acted most quickly on weed growth, with the sodium salt being the slowest and the amine in middle position. It was obvious also that a lower rate of application would be necessary in the case of the esters, with the heaviest applications being required in the case of the sodium salt and the amine again in the intermediate position.

The activities of the Agricultural Service Boards continued to be an important part of the weed program, with four new boards being formed during the year to bring the total to twenty-seven.

To date Service Boards have been formed only in Municipal Districts.

However, the success which has followed their formation in these areas has resulted in demands from Local Improvement Districts for similar services. In one instance, a petition containing some three hundred names was forwarded in support of the request for a Service Board.

The change in attitude of the farmer towards weed control is evident by the fact that the Field Supervisor receives numerous requests to visit farmers and discuss their weed problems, whereas, under the former method they frequently resented the visit of the part-time inspector.

It is noticeable also that under the new system fewer "Notices to Prohibit Seeding" are necessary in the various Municipalities. This is due to the fact that farmers are more weed conscious and are following the advice of the Field Supervisor in meeting their weed problems before a serious condition arises.

It is interesting to note that farms that were placed under reclamation order at the beginning of the Service Board program three years ago are already being returned to their owners in a productive condition. This fact is doing much to influence farmers in favor of Service Board activities. In some instances farmers are requesting that the Board draw up cropping programs for their farms.

Twenty-four Local Improvement District weed inspectors and three Weed Supervisors were employed. These men were directly responsible to the Field Crops Branch and were in charge of weed control in the outlying areas of the Province.

Twenty-seven full-time Field Supervisors were employed by Municipal Districts as well as thirty-two part-time weed inspectors. This made a total of eighty-six weed workers in the field in 1947.

The Department of Agriculture continued its policy of distributing sodium chlorate at cost. One hundred thousand pounds of this material was distributed during the season.

The program of seeding down weed infested Crown lands to forage crops was continued in 1947 with 2,000 pounds of seed being distributed for use on lake shores. This work was done under the direction of Weed Inspectors and Field Supervisors.

Inefficient seed cleaning equipment has been a serious source of infestation of farm lands in Alberta. In some instances poorly constructed equipment made proper cleaning impossible, and resulted in a mixing of different lots of seed. This, in many cases, resulted in the introduction of troublesome weeds into areas not affected before the alleged cleaning operation was performed. The careless handling of weed seeds has contributed to the spread of noxious weeds.

In order to exercise some control over the operation of cleaning plants and equipment and the handling of screenings, legislation was introduced which requires that all cleaning plants processing cereal or forage crop seeds must obtain a permit.

A permit is issued only if, in the opinion of the Field Crops Commissioner, the cleaning equipment is properly constructed and efficiently operated.

A total of 145 permits were issued to operators of seed cleaners in 1947.

CROP PROTECTION

J. L. Eaglesham

General:

Alberta crops suffered less from plant pests in 1947 than for several years previous. No widespread outbreaks of insects or plant diseases occurred and the damage caused by those insects whose populations are not subject to spasmodic changes were about normal. The southern part of the province enjoyed ample precipitation during the spring season to produce sufficient growth to withstand normal insect feeding without apparent damage.

Grasshoppers:

Crop damage by grasshoppers was lighter than in any year since 1930. Fewer eggs were laid in the fall of 1946 than in several previous years. Climatic conditions in the spring and early summer of 1947 were conducive to the production of luxuriant plant growth over all the area where grasshopper eggs had been laid. Food other than crops was abundant and cereal grains withstood grasshopper feeding without noticeable reduction in stand or yield. Some losses occurred in cover crops this fall in the Granum strip-farming district; some strips being reduced by 50 per cent. There was slight damage in mustard and flax fields in the district south of Lethbridge.

In Northern Alberta, sharp local outbreaks occurred at Cherry Point, Glen Leslie and Eaglesham. At the former point

damage was negligible. At Glen Leslie about 100 acres of coarse grains were destroyed and a number of large hay sloughs were completely denuded. However, the outbreak was practically wiped out by disease before further crops were attacked. At Eaglesham an extremely heavy local outbreak occurred over an area of approximately fifteen square miles. Prompt application of control measures resulted in spectacular control and all crops in the entire area were saved from destruction.

The following table compares certain aspects of the 1946 and 1947 grasshopper campaigns.

	1946	1947
Acres of land in the area	8,000,000	2,500,000
Acres of crop land menaced	60,000	32,000
Number of Stations operated	6	11
Bushels of poisoned bait spread	16,000	9,100
Number of farms receiving bait	242	107
Estimated acres of crop destroyed	1,200	1,000
Estimated acres of crop saved	8,000	3,500

Some increase in the grasshopper population is forecast for 1948. However, stocks of bait ingredients in store are believed sufficient to meet the situation. With the development of new insecticides, it is probable that the present method of control by baiting will soon be replaced by control by application of chemical sprays or dusts, which will have a much more lasting toxicity than our present-day baits.

Wheat Stem Sawfly:

The gradual decline in damage caused by this insect was reversed in 1947. In general, the situation was slightly more critical than that of the previous year, while in certain districts, the severity of the infestation increased materially with correspondingly heavier losses. Below is a comparison of estimated losses due to the wheat stem sawfly in 1946 and 1947, by affected crop districts.

Crop District	1946	Loss in Bushels	1947
1	1,050,000		1,289,000
2	144,500		143,880
3	180,000		197,500
4	1,680,000		1,586,250
5	10,000		56,400
6	100,000		150,000
7	5,000		Negligible
	3,169,500		3,423,030

In the area running south-east from Lethbridge to Milk River and east to Lucky Strike, in Crop District 1, the damage was quite severe this year. This was also the case west of Warner in Crop District II, where little damage had ever previously been reported. In Crop District IV, while the Blackie-High River district suffered less this year than last, damage between Champion and Vulcan greatly increased. The same situation occurred in the Vulcan-Milo-Arrowwood triangle.

Efforts were continued to encourage farmers in affected areas to make fuller application of recommended sawfly control practices. The use of some sawfly-resistant crops, including mustard and flax, has been noticeable in severely infested districts. "Rescue", the comparatively new sawfly-resistant wheat, played a useful part this year in reducing damage and the demand for seed of this variety is increasing, particularly in Zone I.

Entomologists forecast another substantial increase of damage by the wheat stem sawfly in the next few years, particularly in the following districts: Provost, Consort, Huxley, Three Hills, Acme and Rockyford, as well as in many of the areas affected this year.

Cutworms:

The red-backed cutworm, which was so troublesome to cereal and clover crops in Central Alberta in 1946, was not a serious problem this year. Few cases of damage were encountered, and the total loss was slight.

The pale western cutworm infestation covered a very wide area in Southern Alberta, but due to favourable growing conditions the over-all loss was less than was anticipated. 1,250,000 acres of crops were infested and the loss is estimated at 350,000 bushels. Heaviest crop losses occurred from Lethbridge to the Montana border and north-east to Enchant and Milo. Damage ranging from slight to complete occurred at Drumheller, Consort and in the area between Empress and Medicine Hat. In some cases even second seedings were completely destroyed. The infestation is expected to spread over a still greater area in 1948.

Wireworms:

Crop injury from wireworms was slightly less in 1947, although at Bow Island, Warner, Strathmore and Calgary, in Southern Alberta, damage was reported. Mannville and Edmonton in Central Alberta also reported damage. While excellent growing conditions repaired most of the damage in the south, this was not the case elsewhere. Potato crops at Vauxhall, Monarch, Calgary and Edmonton suffered heavily; the tubers in some fields being so badly perforated that the marketability of the crops was greatly reduced.

Minor Crop Pests:

The Colorado potato beetle infestations in most of Southern Alberta were about normal, but application of control measures prevented serious loss to potato crops. Where no effort was made to control the pests, heavy defoliation resulted in light yields. There was another reduction in the number of beetles present in Central Alberta this year.

Beet webworms attacked sugar beet fields in Southern Alberta, the estimated loss being ten per cent on one thousand acres. This was slightly greater than last year. Flax crops in the area from Claresholm through Turin and south to Warner, suffered somewhat from the same pest, while slight damage also occurred in commercial mustard fields in the Warner district.

The potato psyllid caused very little trouble this season.

This is the second season that no commercial dusting for pea aphid control has been necessary. For several years previous to this, pea crops had to be dusted to avoid damage from these insects.

Cattle Grubs (Warble Flies):

The effort to reduce damage from cattle grubs was continued on much the same scale as in previous years. A concentrated extension campaign was conducted throughout the entire province, with special emphasis being placed on co-opera-

tive community control programmes. It is estimated that approximately 850,000 head of cattle were treated for grubs. In spite of this fact there was a noticeable falling off in interest in a few districts. In several communities, where practically all cattle have been treated for the past two or three years, many stock-owners insisted that since the cattle no longer showed signs of infestation, continued treatment was not necessary. In these communities many stockmen failed to treat. While this situation demonstrates the success of the programme carried out over the past five years, it is nevertheless an undesirable development. Efforts have consequently been made to overcome the feeling that control is no longer necessary in such districts. In spite of the above trend, however, most sections of the province achieved another satisfactory increase in the number of cattle treated for grubs in this year's campaign.

Rodents:

There were more Columbian ground squirrels present in the southern Foothills this year than last. In 1946 damage was slight. This year there was a heavier invasion of farming areas by this pest and several cases of damage to hay and grain crops and gardens were reported.

Pocket gophers have increased rapidly in the past two years. This is particularly the case in the black soil areas of the province. Considerable publicity has been given to the control of pocket gophers through this office and through offices of the District Agriculturists in the districts concerned. However, few farmers have actually undertaken control activities. Heavy damage to fields and to hay and pasture crops was caused by pocket gophers throwing up mounds and feeding on plant roots from their burrows. This pest merits increased attention in 1948, to acquaint farmers in affected districts with proper methods of control and to encourage the application of adequate measures to reduce damage.

Crop Diseases:

Crown rot and bacterial wilt continued to spread in alfalfa crops in many parts of Alberta. Both these diseases have been very destructive this year and there is an urgent need for the development of suitable strains of alfalfa resistant to both crown rot and bacterial wilt.

Winter killing of winter wheat crops in Southern Alberta was severe. South-east of Lethbridge many fields were completely killed out and had to be re-seeded to spring crops. Damage was less, though still very severe at Cardston, Lethbridge and Pincher Creek. Heavy killing also occurred north of Nanton, while at Claresholm, crops largely escaped loss. The major cause was the Take-all fungus.

Fire blight continued severe in the Edmonton district, seriously affecting many apple and crab trees.

Bacterial Ring Rot:

Some further progress was achieved in the control of potato ring rot. While gains made this year were not as satisfactory as in some previous seasons, the ground gained has been held and some additional improvement made. The number of farms

in the province found to have ring rot-infected potato crops has been reduced from 103 to 76 in the past year. While it is true that this year's survey did not cover as many farms as were covered last year, there were also considerably less farmers producing potatoes for market this year. The recent survey was as complete as those of previous years. All irrigated areas in the province were very thoroughly covered, but continuous heavy rain in September made completion of inspections in the Edmonton and Drumheller districts impossible before frost destroyed potato foliage.

The following table shows the growth of the ring rot epidemic in Alberta and the progress toward its control to date.

	1940	1941	1942	1943	1944	1945	1946	1947
No. of farms inspected	261	430	406	965	1010	1198	1637	1127
No. of farms diseased	73	102	151	235	241	137	103	76
Change in number of diseased farms from previous year ...	+33	+29	+49	+84	+6	-104	-34	-27
Percentage of inspected farms found diseased	28.0	24.7	37.3	24.1	24.8	11.4	6.3	6.6

Regulations for the control of bacterial ring rot were originally brought into being in 1942 and were used in conjunction with extension efforts that fall and winter. Considerable improvement in the situation resulted. Very few prosecutions were made under the regulations in 1943, but in the winter of 1944-45 substantial penalties were asked for violation of the regulations. The following season's survey showed that the percentage of inspected farms showing ring rot dropped from 24.8 to 11.4 per cent. A substantial reduction was achieved the succeeding year by the same means.

During the past year more reliance was placed on educational efforts in the hope that such rigid enforcement of control regulations might not be necessary and only one case was brought to court in the past twelve months. However, as shown in the above table, the percentage of inspected farms showing positive tests for ring rot has increased from 6.3 to 6.6. While an increase of 0.3 per cent might not be considered significant, it would appear that educational means alone, however thorough, will not be sufficient to reduce this disease much further and more rigid enforcement of regulations would again appear to be in order.

Seed Potato Production:

The production of seed potatoes was again encouraged. Contracts were entered into with farmers in ring rot-free districts for the growing of seed from Foundation and Foundation A stocks. Special supervision was given contract growers and a considerable amount of their production was accepted for distribution in districts where ring rot is prevalent. Some of the potatoes distributed under this programme were one year removed from certification, while the balance was all of Foundation or Foundation A grade. In all, 909,915 pounds of potatoes were handled under the programme this year.

Potato Inspection:

Further steps were taken to improve the grade of potatoes offered for sale by growers. Additional inspectors were added

to the existing Dominion Government Inspection Staff under the scheme, whereby this Department pays all travelling costs. These staff additions were made at Brooks, Lethbridge and Edmonton. More thorough enforcement of regulations under The Vegetable Sales (Alberta) Act has produced a very marked improvement this year in the grade of potatoes being offered for consumption within the province.

Acknowledgment:

The assistance and co-operation throughout another year by members of the Dominion Science Service in the control of crop pests is acknowledged. Staff members of the Dominion Entomological Laboratory at Lethbridge have greatly assisted by identifying and recommending control measures for many insect pests. They have also completed surveys and forecasts for the coming year. The Dominion Laboratory of Plant Pathology at Edmonton provided assistance throughout the year in a similar manner, respecting plant diseases. Technical assistance given this Department, particularly by Dr. L. E. Tyner, in the control of bacterial ring rot of potatoes, was especially helpful. The generous co-operation of the staffs of these two institutions is greatly appreciated.

INDEX FOUNDATION SEED POTATOES

Assistance in the production of indexed Foundation seed potatoes was continued this year. The University of Alberta and the Dominion Seed Potato Certification Service co-operated with the Field Crops Branch to test tubers grown by selected foundation seed potato growers. Readings were taken to determine the degree of freedom from disease of the plant produced. There were 1,357 tubers planted in the greenhouse, of which 987 or 72 per cent qualified to go out as tuber indexed foundation seed.

This Branch again continued to pay bonus of one dollar for each hundred pounds of foundation seed potatoes produced from indexed stocks and disposed of to seed potato growers approved by the Branch. The programme is designed to maintain a source of pure seed stocks. The varieties included in the programme this year were Netted Gems, Warba, Carter's Early Favourite, Duke of York, Irish Cobbler, Vic's Extra Early, Earlane, Columbia Russet, Early Ohio and White Rose.

OCEANSIDE SEED POTATO TESTS

A service has recently been developed whereby seed potato growers in the United States and some provinces of Canada may have representative samples of their seed stocks grown out during the winter at Oceanside, California, to determine their freedom from disease. Readings are taken and the results are made available to growers in advance of our normal seed buying and planting season. The Branch undertook this year to encourage and assist Alberta seed potato growers to take advantage of this service in the belief that a rating in such a widely recognized test would aid in the development of export markets for our seed stocks. Samples from twenty-six growers were sent for a growing test at Oceanside, under a contract entered into between this Department and the California Department of Agriculture. Arrangements have also been made for disease readings to be taken at Oceanside.

REPORT OF THE LIVE STOCK BRANCH

A. A. Campbell, Live Stock Commissioner.

I. A. Coles, Live Stock Supervisor.

W. H. T. Mead, Supervisor of Live Stock Breeding Associations.

A. J. Charnetski, Live Stock Supervisor.

REPORT OF I. A. COLES, Live Stock Supervisor (Cattle)

Regardless of the late backward spring, cattle came through the winter in fair to good condition.

Pastures in some eastern areas of Alberta suffered considerably by the mid-summer drought, but were revived by later rains.

Grain and fodder supplies are sufficient except for a few areas which are low on feed grains.

Top female breeding stock continues to be in strong demand and has been selling at high prices. However, prices for plainer individuals were lower than in 1946.

The top Hereford sale of the year was held at the W. A. Crawford-Frost Ranch at Nanton on October 7th, at which 20 bulls averaged \$613.00 and 55 females averaged \$525.00.

At the third annual sale of Shorthorn bulls held at the Exhibition Grounds, Edmonton, on May 13th, by Claude Gallinger, 31 head sold for a total of \$43,750.00, averaging \$1,411.00. The high price of the sale was \$3,600.00, paid by A. Radebaugh, Dayton, Wash., U.S.A., for "Killearn Max Stamp" (285294). Second highest price of \$2,900.00 was paid by one of our leading Shorthorn breeders, W. L. Robinson, Vermilion, for the ten-month-old bull calf "Killearn Max Emperor" (254948). Sixteen of the above bulls were purchased by Alberta breeders, with eight going to Saskatchewan, four to Manitoba and three to the United States.

A total of 850 bulls were sold at the 47th annual Calgary Bull Sale for an average price of \$478.15, which is the highest price obtained since the Calgary Bull Sale was inaugurated in 1901.

R. G. Spooner, Midnapore, paid \$4,000.00 for the Hereford bull "Caerleon Standard 46th" (187052), bred by W. A. Crawford-Frost, Nanton.

H. R. Walters, Clive, paid \$1,200.00 for the Shorthorn bull "Elburn Command" (282719), bred by P. W. Stefura, Chipman.

S. J. Henderson, Lacombe, paid \$1,100.00 for the Angus bull "Dalrene Black Bar 3rd" (83237), bred by Flint & Flint, New Norway.

At the Edmonton Spring Show and Sale, held on April 9th, the champion was a Hereford steer shown by Lawrence Kallal, of Tofield, and was purchased by the T. Eaton Company Western Limited for 80 cents per pound. The reserve champion, a Hereford steer shown by Ed. F. Noad, Olds, was purchased by the T. Eaton Company Western Limited for 50 cents per pound. Following is a summary of the average prices at the sale:

49 calves averaged	24.48 cents per pound
55 singles averaged	24.09 cents per pound
29 lots of five averaged	24.86 cents per pound
19 lots of fifteen averaged	24.19 cents per pound

June survey of the number of cattle on Alberta farms for the past five years is as follows:

Year	No. of Head
1943	1,627,000
1944	1,742,000
1945	1,860,200
1946	1,768,100
1947	1,654,000

The decrease in numbers from 1946 is 114,100 head or 6.89 per cent.

The official reports of the Dominion Department of Agriculture show for Alberta the following cattle and calf marketings and total value for 1943 to 1947 (inclusive):

Year	No. Cattle	Value	No. Calves	Value
1943	296,251	\$25,729,399.00	74,502	\$2,191,848.00
1944	384,257	32,715,600.00	87,888	2,319,400.00
1945	534,815	46,197,320.00	118,923	3,197,839.00
1946	494,137	47,664,500.00	100,513	2,880,700.00
1947	423,154	46,123,786.00	87,185	2,571,085.00

The above figures show a comparison of cattle production and the annual revenue derived.

CATTLE AND CALF SHIPMENTS OUT OF THE PROVINCE

	1943	1944	1945	1946	1947
British Columbia	69,513	76,202	82,308	91,717	102,924
Saskatchewan	7,772	8,820	13,310	23,068	12,734
Manitoba	22,134	32,626	41,693	37,796	27,197
Ontario	13,999	26,324	18,411	16,330	18,508
Quebec	26,154	36,312	33,802	31,207	34,627
Nova Scotia		54	366	33	375
New Brunswick			151	279	
U.S.A.	254	139	400	7	150
N.W.T.					
Prince Edward Island					56
	136,226	179,477	190,441	200,437	196,571

AUCTION SALES OF PURE-BRED CATTLE

CALGARY BULL SALE:

	1945		1946		1947	
Breed	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn	129	\$367.52	178	\$325.59	157	\$340.35
Angus	118	285.80	151	263.51	94	371.81
Hereford	552	513.96	624	442.74	599	530.97
TOTAL ALL BREEDS	799	\$456.63	953	\$392.46	850	\$478.15

EDMONTON BULL SALE:

	1945		1946		1947	
Breed	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn	96	\$225.26	77	\$295.58	144	\$233.30
Angus	28	180.71	27	189.25	20	221.00
Hereford	28	292.14	55	311.73	70	343.93
TOTAL ALL BREEDS	152	\$229.38	159	\$283.11	234	\$265.34

LACOMBE BULL SALE:

	1945		1946		1947	
Breed	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn	43	\$235.00	66	\$238.33	85	\$231.00
Angus	44	224.00	34	241.30	36	372.00
Hereford	61	277.00	113	214.86	61	388.00
TOTAL ALL BREEDS	148	\$249.04	213	\$226.35	182	\$311.51

LLOYDMINSTER BULL SALE:

	1945		1946		1947	
Breed	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn	39	\$209.00	44	\$218.40	53	\$227.54
Angus			2	280.00	1	280.00
Hereford	32	394.00	58	323.62	53	351.32
TOTAL ALL BREEDS	71	\$292.38	104	\$278.27	107	\$289.34

CAMROSE BULL SALE:		1945		1946		1947	
Breed		No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn						32	\$170.93
Angus						1	200.00
Hereford						32	199.06
TOTAL ALL BREEDS:						65	\$185.22

THE CATTLE IMPROVEMENT POLICY (Pure-bred Sires)

Under the Cattle Improvement Policy, pure-bred sires are placed with farmers at reduced prices whereby the Department of Agriculture contributes 25 per cent of the cost of the sires, in addition to the freight charges to the applicant's nearest railway station.

This policy has resulted in securing better sires for commercial cattle breeders and a marked improvement has been noted in areas where a reasonable number of these bulls have been placed under the Cattle Improvement Policy.

During the year, 767 bulls were placed under this policy.

The Live Stock Listing Bureau

Under this policy pure-bred breeding stock, male and female, are placed with pure-bred breeders and others not entitled to come under the Cattle Improvement Policy. There is no financial assistance under this policy. During the year, 17 bulls and 8 females were placed.

Bulls placed through the above policies were purchased from 390 cattle breeders throughout the Province.

Dairy Heifer Calf Club Policy.

Members of ten Dairy Calf Clubs, located at Andrew, Barrhead, Betchton, Bowden, Elnora, Holden, Red Deer, St. Paul, Smoky Lake and Vilna, received a total of 158 grade Holstein heifer calves. Strong competition continues in the purchasing of calves. A small number of dairymen in the Edmonton district, interested in the activities of the club members, have supplied calves since this policy started. It is gratifying to note that more dairymen are becoming interested in this work, hence more calves are available.

REPORT OF W. H. T. MEAD

Supervisor of Live Stock Breeding Associations (Artificial Insemination)

A continuation of artificial insemination work from the breeding laboratory at Olds has not indicated any justification in expanding the service to other areas for service to grade cattle, or to other Breed Associations, under the plan to service pure-bred cows.

The factors in Alberta Agriculture (mainly sparse population with limited communication facilities, coupled with a long, severe winter) that tend to increase service costs and reduce breeding efficiency, coupled with the natural weakness of artificial insemination itself, has resulted in mediocre breeding results that are not satisfactory to a majority of breeders, who must be guaranteed a reasonable assurance of a full milk flow at certain times of the year to make their dairy enterprise a

paying proposition.

Continuation of the work has given some clues to difficulties that heretofore seemed beyond solution because of the great variation in results without any well-defined trends.

Work carried on at this breeding centre would indicate that the basic weakness in artificial insemination lies in the sires and the variations in technique has very little effect on breeding results. This basic weakness can only be overcome by a system of trial and rejection, that, because of the small percentage of suitable sires, may very easily be uneconomical unless very large numbers of cows, maintained under suitable conditions, are available.

During the calendar year 1947, the reaction of milk producers to artificial insemination in the Olds Live Stock Breeding Club would indicate that they were not satisfied with breeding results when artificial breeding was relied on entirely. The number of cows bred in this club for four years are as follows:

	1944	1945	1946	1947
No. of active members.....	120	150	200	210
No. of cows bred	911	975	1212	1104

As pointed out in previous reports, it is questionable if any club can properly finance the distribution of service by breeding less than 1,200 cows per year.

Service to breeders of registered Holstein-Friesian cattle from selected sires has proven more satisfactory even in view of the wide distribution of breeders and difficulty of providing suitable technicians in all cases. Service in these herds is not designed to eliminate the herd bull, but to provide service to a few outstanding cows from top quality sires. Service from the bull "Glenafton Rag Apple Architect" (161294) was available throughout the year. "Hays Thirty Nine Steps" (132363) was not very reliable and was disposed of in October.

As a result of negotiations between the Alberta Holstein Breeders and the Department of Agriculture, a young sire was purchased at the Hays Ltd. dispersal sale at Toronto in June. This bull was "Sovereign Masterpiece" (198299), bred by Norloch Farm, Beechville, Ontario. This bull was put on light service about November 1, 1947. Service from these bulls during 1947 was provided as follows:

	No. of Breeders	No. of Cows Bred
Glenafton Rag Apple Architect	60	265
Hays Thirty Nine Steps	42	90
Sovereign Masterpiece	27	52

Service to all pure-bred cows as compared to other years was as follows:

	1944	1945	1946	1947
No. of Breeders	16	43	58	63
No. of cows bred	108	247	317	407

A special effort has been made by this office to distribute quality sons of these sires into good commercial and pure-bred herds where the demand existed.

Various trials in technique and bull management have been made during 1947 and as previously stated most variations have less effect than the inherit ability of the sires in service.

The most obvious trend during 1947 has been a lowering of efficiency of all bulls in service, including the bulls that have been in service for two or three years previously. The reason for this is not yet known. Increased facilities for bull management and care during 1947 resulted in what was believed to be better management than had heretofore been possible, but breeding results did not bear this out.

REPORT OF A. J. CHARNETSKI,
Live Stock Supervisor (Sheep and Swine)
SWINE

Swine production in Alberta suffered a further decrease in 1947. There were 23 per cent less hogs marketed than in 1946. Farm labour difficulties and relatively high prices for feed grains are considered to be the chief factors responsible for less swine production. Price increase by \$4.00 per cwt. for Wiltshires on export to England did add temporary strength to hog production. Unfortunately, it was short lived, as despite this increase there was an extremely heavy marketing of sows in the month of August.

The quality of market hogs deteriorated. Only 21.8 per cent yielded Grade A carcasses, as against 23.7 per cent last year.

The price decontrol on barley and oats in the latter part of October added much to the confusion and uncertainties of the hog industry. Many farmers have reduced their herds to one or two sows. Others are still holding on in the hopes that a favorable bacon agreement will be re-negotiated, at least to provide for a small margin over production costs. Alberta hog marketings in 1947 were 1,005,450 head, as compared to 1,250,602 in 1946.

Carcass grade comparison for the years 1945 to 1947, inclusive, is as follows:

	1945 %	1946 %	1947 %
A	27.22	23.70	21.96
B	54.85	56.75	54.30
C	7.11	7.56	7.12
D	0.35	0.41	0.33
Lights	0.70	0.69	0.92
Hvy.	2.26	2.80	3.48
Ex. Hvy.	1.48	1.97	3.53
Injured	0.05	0.05	0.06
Rgl.	0.55	0.57	0.54
Stags	0.35	0.39	0.45
Sows	5.10	5.10	7.31

Deterioration in carcass quality may be attributed to the lack of proper care in the growing period of the hog and the shortage of proteins for the purpose of balancing those feeds which are inadequate in protein level. In the past year or two, there was a tendency to market hogs at the extreme weights—"over-finish" is usually associated with this practice. The indiscriminate selection of short, thick type boars by the commercial breeders and some pure-bred breeders did not add to grade improvement. Greater uniformity in the culling and distribution of breeding stock should improve carcass grades.

Hog prices in relation to the price of feed grains were quite

satisfactory until price decontrol on barley and oats caused these feeds to register sharp increases. Early in the year the British Food Ministry announced an increase of \$4.00 per cwt. on sea-board Wiltshires. One-half of this became effective on January 14th, and the other half on September 1st. Therefore (basis Edmonton Plants), A Grade hogs sold at \$19.90 between these dates, and at \$21.50 after September 1st; B1's were \$19.40 and \$21.10 for corresponding periods. Dominion Government Premiums of \$2.00 per head on A Grade and \$1.00 on B1 hogs not included in above prices.

The story of Alberta hog marketings and grades, including the annual value in the past seven years, is tabulated hereunder:

ALBERTA SWINE MARKETINGS, 1941 to 1947 (INCLUSIVE), BY GRADE AND PER CENT WITHIN EACH GRADE

	"A"	"B"	"C"	"D"	Light	Heavy	Extra Heavy	"E"	Sows	Total No.	Total Sales Value
1941—Number	593,257	1,080,763	147,317	6,886	19,857	30,211	7,854	18,162	42,746	1,947,053	\$36,964,988.00
%	30.47	55.51	7.57	0.35	1.02	1.55	0.40	0.94	2.19	100.00	
1942—Number	563,218	1,251,500	160,249	4,986	2,233	78,196	16,584	21,545	83,815	2,182,326	49,517,340.00
%	32.05	51.69	3.36	0.31	0.89	4.41	1.91	1.62	3.76	100.00	
1943—Number	571,107	1,294,375	165,881	4,769	5,124	148,378	43,137	22,779	136,834	2,392,384	60,766,553.00
%	28.25	45.39	3.77	0.59	0.98	6.67	5.03	1.45	7.87	100.00	
1944—Number	724,537	1,640,109	277,865	11,356	17,461	78,400	37,552	24,282	170,328	2,981,940	78,722,000.00
%	24.30	55.00	9.32	0.38	0.59	2.63	1.26	0.81	5.71	100.00	
1945—Number	529,663	1,067,375	138,365	6,836	13,670	43,938	28,714	18,158	99,395	1,946,114	52,895,379.00
%	27.20	54.80	7.10	0.36	0.70	2.25	1.47	0.94	5.10	100.00	
1946—Number	294,873	710,631	93,736	4,832	8,487	36,541	25,328	12,305	63,868	1,250,602	35,667,200.00
%	23.58	56.82	7.50	0.39	0.68	2.92	2.02	0.98	5.11	100.00	
1947—Number	242,720	600,174	78,648	3,720	10,072	33,565	38,975	11,662	80,686	1,105,222	37,621,756.88
%	21.96	54.30	7.12	0.33	0.92	3.48	3.33	1.05	7.31	100.00	

At the Advanced Registry Station at Edmonton, operated by the Dominion Production Service, 60 litters were tested in 1947, and in addition tests were completed on 42 litters carried over from the previous year. This Department co-operates in this worthwhile work by paying transportation charges on litters of four pigs shipped by swine breeders to the Test Station.

The pure-bred breeders experienced a very profitable year. Demand was brisk for good quality breeding stock. It was apparent that commercial breeders did not mind paying a few extra dollars for top quality sows and boars. Unfortunately, there was an insufficient number of these boars and gilts to supply the demand.

The average price of bred pure-bred gilts at the Edmonton Spring Sales for 1945 to 1947 (inclusive) was as follows:

YORKSHIRE

No.	1945	No.	1946	No.	1947
45	\$81.31	53	\$76.60	117	\$77.14
(High)	(\$225.00)	(High)	(\$155.00)	(High)	(\$200.00)

Swine Sales.

The Fall Swine Sales were held immediately after decontrol on feed grain prices was announced by the Dominion Government. This announcement came on the morning of the Calgary Sale, so that full significance of this decontrol did not necessarily reflect unfavourably upon the buying public. Buyers from U.S. points, for the first time, were the strong competitive bidders, which added much strength to the sale. The Edmonton Fall Swine Sale was held a week after the Calgary Sale and there was no American support, which reflected adversely on the prices paid and the number of boars sold. Many of the entries which passed through the ring without a bid could hardly be classed as suitable breeding stock.

Top prices realized were:

	Calgary	Edmonton
Yorkshire Boar	\$175.00	\$150.00
Yorkshire Gilt	155.00	180.00
Tamworth Boar	140.00	85.00
Tamworth Gilt	65.00	40.00

The following tables indicate number of swine sold and the average prices paid at the Calgary and Edmonton Fall Swine Sales, 1945 to 1947 (inclusive):

EDMONTON FALL SWINE SALE

	No.	1945	No.	1946	No.	1947
Yorkshire Sows	97	\$54.20	125	\$56.64	122	\$51.43
Tamworth Sows			5	44.50	2	40.00
Yorkshire Boars	83	47.50	118	60.78	102	50.88
Tamworth Boars	8	40.62	3	80.00	12	54.79
	188	\$40.70	251	\$58.62	238	\$51.27

CALGARY FALL SWINE SALE

	No.	1945	No.	1946	No.	1947
Yorkshire Sows	114	\$44.00	89	\$58.67	93	\$55.40
Tamworth Sows	35	38.37	20	67.87	6	47.50
Berkshire Sows	2	33.00				
Yorkshire Boars	94	47.44	96	65.88	78	57.37
Tamworth Boars	29	51.28	19	50.92	10	80.25
Berkshire Boars	6	40.83				
	280	\$45.06	224	\$62.38	187	\$57.30

Average prices for all sows and boars sold at Fall Sales:

Year	Sows		Boars		Total	
	No. Head	Av. Price	No. Head	Av. Price	No. Head	Av. Price
1941	177	\$34.45	217	\$37.52	394	\$36.90
1942	218	43.35	239	42.73	457	43.03
1943	271	43.33	283	45.94	554	44.67
1944	184	40.75	168	38.42	352	38.47
1945	248	47.14	220	42.99	468	45.65
1946	239	58.08	236	62.73	475	60.39
1947	231	54.18	202	55.07	433	54.60

The Swine Improvement Policy.

The Swine Improvement Policy provides for the shipping of pure-bred boars to eligible applicants, express or freight charges prepaid. A breeder of commercial hogs is entitled to purchase one boar in each two-year period. Only top quality boars are supplied. These are purchased from reputable breeders in this Province.

The Live Stock Listing Bureau provides for supplying pure-bred boars and gilts to those who do not qualify under the Improvement Policy. Many pure-bred breeders, and some swine men in other provinces, take advantage of this policy.

The placement of boars and gilts under the above policies for the years 1941 to 1947 was as follows:

Year	Live Stock Listing Bureau		Boars	Policy Boars	Total
	Gilts				
1941				207	207
1942	24	10		251	261
1943	31	50		362	412
1944	9	15		180	195
1945	26	15		187	202
1946	36	17		200	217
1947	50	5		190	195

Dominion-Provincial Brood Sow Policy.

This policy is operated jointly by the Dominion and the Alberta Department of Agriculture in placing pure-bred and grade gilts. The cost of shipping the gilts is shared equally by the two Departments. The Dominion Department supplies a boar with each group of 20 sows placed. According to 1947 records, 249 gilts were shipped to applicants.

Bacon Shows.

The Bacon Shows are held jointly by the Dominion and the Alberta Department of Agriculture. The former is responsible for the collection of suitable material (Wiltshire sides) for demonstration at points of origin. They also provide a well qualified Grader to attend these meetings. The Alberta Department is responsible for arranging and providing a speaker on breeding and management of swine.

The number of meetings held, the total and average attendance for the years 1945 to 1947 (inclusive) is tabulated hereunder:

Year	No. of Meetings	Total Attendance	Average Attendance
1945	27	3,030	111
1946	6	520	86
1947	9	700	78

Other Meetings.

Two years ago the Department inaugurated a plan whereby District Agriculturists could arrange for Swine Field Days. Breeding and market hogs were used for demonstration purposes.

Matters of importance to swine producers, such as pastures, housing, feeding and diseases, etc., were discussed at these Field Days. The T. Eaton Company (Western Section) provided prize money for judging contests. During 1945 and 1946, a total of 19 meetings were held, with an average attendance of 63. Unfortunately, due to pressure on field staff for other work, these Swine Field-Days had to be abandoned in 1947. However, there were 16 general meetings held during the year. The total attendance was 566, the average being slightly over 35 persons.

Considerable time was required in the purchasing of boars and gilts supplied under the policies, also in the preparation of various feed and production costs material.

Many farm investigations were required—the problems ranged from feeding, housing and management to those of culling pure-bred and grade swine herds.

SHEEP

Sheep population in Alberta again suffered a marked reduction, contributing factors being lack of range, suitable sheep herders and the coyote and dog menace to smaller flocks. Sheep were largely replaced by cattle, as they are handled with less labour during the summer months.

June survey of Alberta sheep population for years 1940 to 1947 show the following numbers:

June		June	
1940	882,600	1944	1,023,200
1941	702,451	1945	974,900
1942	828,000	1946	666,800
1943	900,000	1947	613,800

Mutton prices were about at last year's level, lamb prices higher. Good handyweight sheep sold at \$5.00 to \$12.00 per cwt., while good handyweight lambs sold at \$11.75 to \$15.50 per cwt.

The demand for feeder lambs far exceeded the supply, at prices above those of last year. Good lambs sold at \$11.00 to \$12.50 as against \$10.00 per cwt. in 1946. It is estimated that there are 230,000 lambs on feed this year, including a small number of old ewes.

The pure-bred sheep breeders had a very profitable year. Demand for pure-bred sheep from across the line was very keen and the number of sheep exported exceeded those of last year.

The following table indicates the movement of pure-bred sheep from Alberta to the U.S.A. in the years 1945 to 1947 (inclusive):

Year	No. Head
1945	1,061
1946	1,124
1947	1,938

The Stud Ram Sale inaugurated in 1946 and held at Calgary during the Stampede Week was continued in 1947. The table hereunder covers these sales:

Year Sold	Year of Birth	Breed	RAMS			EWES		
			No.	Av. Price	Top Price	No.	Av. Price	Top Price
1946	1945	Suffolk	9	\$ 87.25	\$170.00	16	\$56.25	\$ 95.00
	1946	Suffolk	7	99.36	125.00	7	50.00	77.50
	1945	Hampshire	7	57.85	120.00	4	46.25	80.00
	1946	Hampshire	3	58.33	100.00	2	35.00	45.00
1947	1946	Suffolk	9	111.50	325.00	9	62.50	130.00
	1947	Suffolk	12	79.88	260.00	5	50.50	60.00
	1946	Hampshire	5	114.50	330.00	4	36.88	42.50
	1947	Hampshire	3	70.83	100.00			

Edmonton and Calgary Sheep Sales.

The Edmonton and Calgary Fall Sheep Sales proved very successful as higher prices were realized in comparison with the previous year. At Calgary, the American buyers were an important factor in strengthening the sale price. At Edmonton, the breeders offered a smaller number of sheep than last year—this, coupled with improvement in the quality, accounted for a very satisfactory sale. The Calgary average for all ewes was \$30.27 as compared with \$26.07 in 1946. The ram average was \$52.00 as compared with \$42.06 last year. The Edmonton ewes average was \$26.33; last year's average was \$15.47. Rams averaged \$35.80 as compared with \$29.76 in 1946. The Calgary high for a Suffolk ram was \$550.00; for a Hampshire \$115.00. The Edmonton high Suffolk was \$125.00; for a Hampshire it was \$100.00.

TABULATED REPORT OF (PURE-BRED) AUCTION SALES

EDMONTON

Breed	1945		1946		1947	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Suffolk Ewes	63	\$16.98	53	\$19.23	15	\$38.66
Oxford Ewes	8	11.87	11	12.91	5	16.00
Shropshire Ewes	11	10.25			6	15.00
Southdown Ewes	3	12.00	2	21.25		
Hampshire Ewes	31	14.09	13	22.88	34	24.41
TOTAL	116	\$14.82	79	\$19.88	60	\$26.33
Suffolk Rams	108	\$29.03	93	\$30.30	41	\$30.00
Oxford Rams	15	21.30	6	30.42	8	29.44
Shropshire Rams	15	18.10	2	15.00	1	22.50
Southdown Rams	7	29.07	2	18.50	2	30.00
Hampshire Rams	90	23.12	35	29.57	42	33.63
Cheviot Rams			1	32.50		
TOTAL	235	\$25.57	139	\$22.57	94	\$35.80
Grade Ewes	25	\$ 7.40	50	\$ 7.30	14	\$10.07

CALGARY

Breed	1945		1946		1947	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Suffolk Ewes	163	\$31.04	92	\$34.80	102	\$46.81
Shropshire Ewes						
Southdown Ewes	11	14.66	10	30.40	8	35.81
Hampshire Ewes	181	14.15	128	19.38	75	23.70
TOTAL	355	\$21.91	230	\$26.07	185	\$36.42
Suffolk Rams	200	\$43.07	109	\$60.10	136	\$64.27
Shropshire Rams						
Southdown Rams	27	23.11	12	16.79	13	21.57
Hampshire Rams	206	27.80	158	35.28	115	44.03
Rambouillet Rams	10	24.60	3	20.00	4	21.25
Cheviot Rams	5	51.00	5	30.00	6	29.67
Cotswold						
Corriedale Rams	9	34.11	5	31.40	5	37.20
Lincoln Rams						
TOTAL	457	\$34.61	302	\$42.06	279	\$52.09
Grade Ewes	185	\$ 7.00	38	\$ 8.85	63	\$12.19

Trends in numbers and value of commercial sheep marketings
in Alberta for the years 1937 to 1947 (inclusive):

Year	Stock Yards	Plants	Direct on Export (x)	Total	Value
1937	62,324	157,189	46	219,559	\$1,185,619.00
1938	48,451	151,029	125	199,605	1,097,828.00
1939	68,653	154,801	337	223,791	1,353,936.00
1940	61,977	130,672	32	192,681	1,319,865.00
1941	74,290	138,738	804	213,032	1,657,198.00
1942	42,573	162,399	1,563	207,035	1,880,189.00
1943	57,386	152,626	642	210,654	1,805,304.00
1944	72,239	205,739	25,146	303,124	2,515,900.00
1945	75,556	196,836	56,562	328,954	2,921,112.00
1946	83,515	214,574	1,475	299,564	2,917,300.00
1947	84,952	202,560	1,671	289,183	3,053,772.48

(x) Sheep on export in 1946 and 1947 are presumed to be pure-pred. Export of market sheep was not permitted in the years 1946 and 1947.

Sheep Improvement Policy.

This policy continues to be popular with the more progressive owners of small flocks. However, due to general flock reduction, a smaller number of rams were placed in 1947. Eligible applicants may obtain one or two pure-bred rams in each two-year period. Applicants who do not qualify under the policy, and those who require breeding ewes, obtain these under the Live Stock Listing Bureau.

The number of ewes and rams placed for years 1941 to 1947 (inclusive) is listed hereunder:

Year	Under Live Stock Listing		Under Policy	
	Ewes	Rams	Rams	Total Rams
1941			69	69
1942	11	14	81	95
1943	4	9	26	35
1944	11	3	31	34
1945			25	25
1946	5	2	45	47
1947	52	1	39	40

(50 grades)

HORSES

Spring auction sales of horses were held at Brooks, Calgary, Edmonton, Lacombe, Lethbridge, Red Deer and Stettler. A total of 2,630 horses were sold, realizing \$194,147.00, for an average of \$73.82 per head. This is an average increase in sale price of \$12.14 over the previous year's sales at the same points, when 3,470 horses averaged \$61.68 per head. Higher prices were attributable to fewer horses offered for sale; a larger percentage of better fitted animals, and the large number purchased at higher than usual prices for meat purposes by the Horse Co-operative Marketing Association Limited, Edmonton.

The trend in horse production may be depicted by the decreases shown in the June surveys of horse population, during the last five years as follows:

	No.	No. Decrease	% Decrease
1943	627,900	19,100	3.0
1944	603,500	24,400	3.9
1945	564,200	39,300	6.6
1946	469,000	95,200	16.9
1947	410,900	58,100	12.4

This shows a decrease of 217,000 horses or 34.6 per cent. The lack of interest in horse breeding is further shown in the 70 per cent decrease in number of stallions enrolled for a similar period. There were 599 stallions enrolled in 1943 as compared with 180 in 1947.

Stock inspection records indicate that 18,988 Alberta horses were inspected at the Horse Co-operative Marketing Association Plant during the year. This marketing channel provides a means of selling many surplus horses.

Export of horses for the period 1943-47 is as follows:

	1943	1944	1945	1946	1947
British Columbia	2,295	1,377	1,023	1,029	696
Saskatchewan	443	511	131	2,692	7,712
Manitoba	1,624	790	502	776	791
Ontario	1,409	1,416	1,132	3,033	1,231
Quebec	6,412	7,667	4,523	12,433	4,156
Nova Scotia	1,187	1,607	1,225	1,909	1,027
New Brunswick	718	550	564	500	127
Prince Edward Island				58	42
U.S.A.	6,686	9,859	6,733	6,308	1,740
Newfoundland	80	123	113	7	
Netherlands			35		
	<u>20,845</u>	<u>23,900</u>	<u>15,981</u>	<u>28,745</u>	<u>17,522</u>

ROYAL WINTER FAIR, TORONTO

The nineteenth Royal Winter Fair was held in Toronto, November 18th to 26th, 1947. Since the inception of the "Royal" in 1922, seventeen consecutive Annual Fairs were held until 1939, when the Fair was suspended during the war years and not resumed until 1946.

Approximately 4,660 head of live stock were entered this year, including 577 in the horse show; 935 in the breeding classes; 724 beef cattle; 1,064 dairy cattle; 919 sheep and 441 swine.

Large numbers of entries of live stock were evidenced in many classes and the average quality of entries was considered higher than in the previous year.

Ten carloads of live stock, comprising 36 horses, 36 cattle, 65 sheep and 13 swine, totalling 150 head, were exhibited at the 1947 "Royal" by Alberta stockmen.

As in previous years, the Dominion Government defrays 75 per cent of eastbound freight charges on the live stock exhibits. The Government of Alberta pays the 25 per cent balance of eastbound freight charges, all local transportation charges to and from assembly point, decking and partitioning costs and feed charges. The railroad carrier returns live stock exhibits free to points of assembly. A most satisfactory and expeditious run to and from Toronto was provided by the Canadian Pacific Railway Company. The Government of Alberta also provided the services of Walter K. Ross, Farm Manager, Olds, acting in the capacity of Overseer in charge of exhibits, and Dr. R. M. Bacon, Fort Saskatchewan, was the Veterinarian. Exhibits were selected by individuals named by the various Live Stock Breeders' Associations.

Awards received on exhibits were as follows:

	Horses	Cattle	Sheep	Swine	Total
Grand Championships	2				2
Reserve Grand Championships		1			1
Senior Championships	1				1
Reserve Senior Championships					
Junior Championships		1			1
Reserve Junior Championships		2			2
Championships		1	4		5
Reserve Championships		1	4		5
First Prizes	5	5	13	1	24
Second Prizes	13	6	9	1	29
Third Prizes	11	5	8	1	25
Fourth Prizes	8	3	7		18
Other Prizes	11	17	16	6	50

Briefly summarized, 17 championship awards and 146 prizes, comprising 24 firsts, 29 seconds, 25 thirds, 18 fourths and 50 other prizes, were obtained on 150 exhibits. Considering the strong competition these results are quite gratifying.

Prospective exhibitors for the next Royal Winter Fair should be making preparations now. There was a marked improvement in the quality of exhibits at the recent "Royal" over the previous year's entries. Should this be any criterion of rate of improvement of quality, live stock exhibits will have to be good to meet the approval of selectors for the 1948 "Royal".

LIVE STOCK FEEDERS' ASSOCIATIONS.

Reports received from twelve Feeders' Associations operating under "The Feeder Associations Guarantee Act" during the

feeding season 1946-47 show large reductions in the amount of credit utilized in the purchasing of fewer feeder live stock, and also in the total membership and number of members who were actually engaged in feeding operations.

These reductions are largely due to the improved financial status of many members, who no longer require a source of credit for the purchasing of live stock.

Satisfactory profits were realized by cattle and lamb feeders.

VOLUME OF OPERATIONS OF ALBERTA FEEDERS' ASSOCIATIONS DURING THE

Association	Address	FEEDING SEASON 1946 - 1947		Cattle	Sheep	No. Members	
		Cost of Animals				Total Feeding Membership	
Battle River Live Stock Feeders' Ass'n. Ltd.	Camrose	\$60,021.28	787			52	27
Bow Valley Live Stock Feeders' Ass'n. Ltd.	Brooks	60,861.86	322	9,615	122	26	
Carstairs Live Stock Feeders' Ass'n. Ltd.	Carstairs	6,770.02	93		2	2	
Central Alberta Live Stock Feeders' Ass'n. Ltd.	Lacombe	82,374.59	1,057	72	32	32	
Lethbridge Live Stock Feeders' Ass'n. Ltd.	Lethbridge	93,977.85	1,000	3,331	95	25	
Raymond-Magrath Live Stock Feeders' Ass'n. Ltd.	Magrath	63,780.93	279	6,612	49	13	
Red Label Feeders' Ass'n. Ltd.	Raymond	51,777.76	407	3,641	55	11	
South Slope Live Stock Feeders' Ass'n. Ltd.	Brooks	31,171.91	170	2,805	58	24	
Taber Live Stock Feeders' Ass'n. Ltd.	Taber	64,436.25	512	3,040	42	11	
U.I.D. Stock Feeders' Ass'n. Ltd.	Lethbridge	71,029.02	498	5,578	73	22	
Vauxhall-Albion Ridge Live Stock Feeders' Ass'n. Ltd.	Lethbridge	67,797.41	731	2,342	64	15	
Vermilion and District Live Stock Feeders' Assn. Ltd.	Vermilion	65,395.02	1,032		174	25	
Wainwright-Edgerton & Chauvin Live Stock Feeders' Ass'n. Ltd.	Edgerton	10,054.00	169		22	12	
		<u>\$729,447.90</u>	<u>7,057</u>	<u>37,036</u>	<u>840</u>	<u>245</u>	

THE STOCK INSPECTION ACT AND THE BRAND ACT

The heavy movement of live stock through various marketing channels kept members of the Stock Inspection staff busily engaged. The large number of Community Auction Sales of cattle at times on similar dates caused considerable difficulty in arranging for requirements of The Stock Inspection Act at various points.

During the year there were 1,453 new brands recorded, consisting of 1,290 cattle, 157 horse, 4 poultry and 2 fox brands; 309 transfers were registered; renewals, 4,949 (3,586 cattle, 1,350 horse, 2 sheep, 6 poultry and 5 fox). Strays, searches and certified extracts numbered 690; butchers' and hide dealers' licenses issued, 594, making a total of 7,995 transactions.

The approximate number of brands in good standing are as follows:

Cattle	23,572
Horse	9,350
Poultry	38
Sheep	37
Fox	70
	<u>33,067</u>

Material for the new brand book was completed during the year.

THE DOMESTIC ANIMALS (UNORGANIZED TERRITORY) ACT

Work continues in the establishing and maintaining of pound districts and arranging for disposal of stray animals. A number of new pound districts were established.

RESTRICTED AREA PLAN

Restricted Area tests during the year comprised the completion of the second general test in the Enlarged Municipal District of Camrose, No. 63, and the commencement of the first general test in the Municipal District of Beaver, No. 73. Work in the latter area is about one-quarter completed, with progress continuing.

Owing to the scarcity of veterinarians available for testing cattle for tuberculosis in Restricted Areas, little progress has been made in this work.

Petitions have been accepted for the establishment of a Restricted Area, for the eradication of bovine tuberculosis, in the Municipal District of Leduc, No. 75.

THE PURE-BRED SIRE AREA ACT

A number of inquiries were received regarding the formation of Pure-Bred Sire Areas. However, there were no new areas established during the year.

REPORT OF THE DAIRY BRANCH

Dairy Commissioner — D. H. McCallum

Supervisors:

Dairy Factory Inspection and Instruction	-L. M. Silcox
Dairy Branch Laboratory	- - - - -J. B. Linneboe
Dairy Cattle Improvement	- - - - -R. P. Dixon
Dairy Cost Study	- - - - -B. J. McBain
Frozen Food Locker Plants	- - - - -L. H. Arnold
Dairy Statistics	- - - - -A. F. Bennett

GENERAL REVIEW

The year 1947 was a satisfactory one for milk production in Alberta. The total quantity amounted to 1,699,993,000 lbs., an increase of 42,210,000 lbs. or 2.5% over that of 1946, and an increase of 1.5% over the pre-war year of 1939. The number of cows kept for milk purposes showed a decrease of 10,300 head or 3.2% at June 1st below that of the same period a year ago. The fact that fewer cows produced more milk is significant and should help to place dairying on a sound economic basis.

Dairy cattle went to pasture in good condition, but pastures were only fair up to August, when an abundance of rainfall assured excellent feed conditions for the fall months. Dairy cattle were stabled about the end of October, which was later than was the case in 1946. The hot dry weather during July resulted in a below normal crop of feed grains which may affect winter production to some extent.

Some slight changes occurred in the utilization of milk. A decrease of 4,421,000 lbs. or 1.6% is recorded for the quantity sold for fluid consumption. Creamery butter, ice cream and evaporated milk all showed increases over the previous year. Cheese production did not equal that of the previous year and shows a slight decrease.

Butter and cheese quality was improved and new records were established for the percentage qualifying as first grade for both products.

The most outstanding feature of dairying during 1947 was the greatly increased value of all dairy products. The total value amounted to \$46,739,000, an increase of \$9,839,000 or 26.7% over 1946. This increase was due largely to the removal of war-time subsidies paid to producers, which did not form a part of the product value in previous statistical records. In addition, there have been price increases as well as the increase in production.

The wartime controls and subsidies were discontinued on the following dates:

March 28th, Order No. 51 of the Dairy Products Board regulating the volume of ice cream mix made during any quarter period was rescinded. Likewise, Order No. 59 which prohibited the addition of milk, cream and other dairy products to Ice Cream Mix at the time of freezing was also rescinded.

March 28th, Order 72 which designated persons entitled to manufacture processed cheese and limited the quantities of

cheddar which could be used in the manufacture of processed cheese was rescinded.

April 25th, Orders No. 65 and 79 which prohibited the inter-provincial movement of creamery butter, cheddar and processed cheese without a permit was rescinded.

April 30th, subsidies paid by the Dominion Government on butterfat used in creamery butter (10 cents per pound) and on cheese milk used for cheddar cheese (30 cents per hundred pounds) were discontinued.

June 9th, all wartime control measures relating to rationing and ceiling prices of dairy products were discontinued as from the above date.

The following table sets forth the subsidy period, rate of subsidy and the estimated total payment to producers of milk and butterfat for various purposes:

Market	Subsidy Period	Rate of Subsidy	Amount Paid
Butterfat for Creamery Butter....	Jan. 1 to April 30	10c per lb.	\$518,933.00
Milk for Cheddar Cheese.....	Jan. 1 to April 30	30c per 100 lb.	26,923.00
Total Amount of Subsidy			\$545,856.00

PRODUCTION AND VALUES OF DAIRY PRODUCTS, 1947 (Preliminary)

Product	Quantity	Milk Equivalent lbs.	% of Total Milk	Average Unit Price	Total Value
Creamery Butter lbs.	32,068,000	751,353,000	44.2	\$.51	\$16,355,000
Farm Dairy Butter lbs.	9,499,000	222,562,000	13.1	.481	4,569,000
Cheddar Cheese lbs.	3,079,000	34,300,000	2.0	.29	893,000
Net increase in processing.....					268,000
Farm Dairy Cheese lbs.	223,000	2,484,000	.2	.26	58,000
Ice Cream * gals.	1,669,000	23,850,000	1.4	1.28	2,136,000
Misc. Factory Products		30,492,000	1.8		1,601,000
Milk and Cream, Fluid Sales..		277,385,000	16.3	3.61	10,012,000
Milk and Cream, farm home consumed		204,215,000	12.0	2.25	4,595,000
Milk Fed Farm Animals		153,352,000	9.0	2.25	3,450,000
Skim-milk & Buttermilk lbs.....	920,621,000			.30	2,762,000
Whey, lbs.	26,715,000			.15	40,000
Totals		1,699,993,000	100.0		\$46,739,000

*Mix converted to Ice Cream on basis of 100% overrun.

PRODUCTION AND VALUE OF DAIRY PRODUCTS, 1946

Product	Quantity	Milk Equivalent lbs.	% of Total Milk	Average Unit Price	Total Value
Creamery Butter lbs.	30,744,000	720,332,000	43.5	\$.3721	\$11,440,000
Farm Dairy Butter lbs.	9,175,000	214,970,000	13.0	.3820	3,505,000
Cheddar Cheese lbs.	3,231,000	35,993,000	2.2	.2309	746,000
Net Increase in Processing ..					224,000
Farm Dairy Cheese lbs.	223,000	2,484,000	.1	.2109	47,000
Ice Cream * gals.	1,036,000	14,804,000	.9	1.21	1,254,000
Misc. Factory Products		28,912,000	1.7		1,147,000
Milk and Cream, Fluid Sales..		281,806,000	17.0	3.19	8,980,000
Milk and Cream, farm home consumed		204,848,000	12.3	1.94	3,974,000
Milk Fed Farm Animals		153,634,000	9.3	1.94	2,980,000
Skim-milk & Buttermilk lbs.....	883,396,000			.29	2,562,000
Whey lbs.	29,084,000			.14	41,000
Totals		1,657,783,000	100.0		\$36,900,000

*Mix converted to Ice Cream on basis of 100% overrun.

ESTIMATED FARM INCOME FROM SALE OF DAIRY PRODUCTS (Preliminary)

	Milk or Butterfat Pounds	Price	Value
Butterfat for Creamery Butter	26,296,000	\$.534 per lb.	\$14,041,000
Butterfat for Ice Cream	694,000	.617 " "	428,000
Farm Dairy Butter Sold.....	1,177,000	.481 " "	566,000
Milk for Cheesemaking & Concentrating	64,792,000	2.20 per 100 lbs.	1,428,000
Milk and Cream for Fluid Consumption....	277,385,000	2.33 " " "	7,841,000
Milk for Ice Cream.....	3,849,000	2.58 " " "	99,000
Total Income			\$24,403,000
Includes Dominion Government Subsidy.			

ESTIMATED FARM INCOME FROM SALE OF DAIRY PRODUCTS, 1946

	Milk or Butterfat Pounds	Price	Value
Butterfat for Creamery Butter	25,210,000	\$.4555 per lb.	\$11,484,000
Butterfat for Ice Cream	452,000	.507 " "	229,000
Farm Dairy Butter Sold	1,329,000	.382 " "	508,000
Milk for Cheesemaking & Concentrating..	64,905,000	1.94 per 100 lbs.	1,259,000
Milk and Cream for Fluid Consumption....	281,806,000	2.60 " " "	7,334,000
Milk for Ice Cream	1,916,000	2.13 " " "	41,000
Total Income ..			\$20,855,000
Includes Dominion Government Subsidy.			

DAIRY MANUFACTURING

Creameries.

During the year, 91 creameries were in operation, and the average output per plant amounted to 352,393 pounds, an increase of 18,219 pounds over 1946.

The Northern Alberta Dairy Pool, Limited, did not operate branch No. 2 at Edmonton for manufacturing creamery butter. This plant being used for manufacturing ice cream and cold storage space.

Three creameries changed ownership, and one closed during the year.

Sylvan Lake Creamery, owned by C. S. Palmer for a number of years, was purchased on May 1st by L. Bridgett and W. C. Crockett.

Barrhead Creamery was purchased on July 1st by the Northern Alberta Dairy Pool Limited, Edmonton, from W. Holman, former owner.

Rocky Mountain House Creamery, formerly owned by C. Sorensen, was purchased on October 6th by the Central Alberta Dairy Pool, Red Deer.

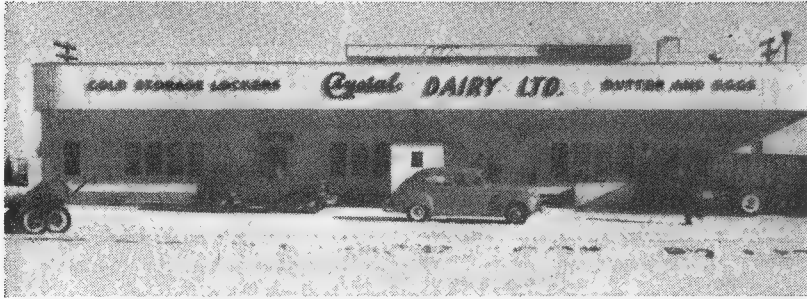
Valhalla branch of the Northern Alberta Dairy Pool Limited, was closed August 23rd and is having the cream delivered to the branch at Grande Prairie.

Sundre branch of Central Creameries Limited was completely destroyed by fire on July 4th, and arrangements were made immediately to rebuild. The new plant was back in operation during October, with an addition of a Frozen Food Locker Service.

Andrew branch of the Northern Alberta Dairy Pool Limited was destroyed by fire November 26th, and plans are under way for rebuilding as early as possible.

Two creameries are now operating in completely new buildings of modern design and equipped with the latest machinery for efficiency. These are the Viking Co-operative Creamery Association Limited and the Northern Alberta Dairy Pool Limited, Grande Prairie.

Extensions and modernization of plants have been effected during the year. These progressive improvements indicate a definite trend toward more attractive and better equipped dairy plants in the province.



CRYSTAL DAIRY LTD., DIDSBURY
WINNER OF THE 1947 IDEAL CREAMERY COMPETITION

LIST OF ALBERTA CREAMERIES:

Northern Alberta Dairy Pool, Limited, head office at Edmonton, with branches at:

Andrew	Edmonton	Millet	Vegreville
Barrhead	Grande Prairie	Onoway	Vermilion
(July 1)	Hay Lakes	Peace River	Westlock
Bonnyville	Holden	Radway	Wetaskiwin
Camrose	Leduc	Sedgewick	Valhalla (closed
Daysland	Mannville	St. Paul	Aug. 23)
Edgerton			

Central Alberta Dairy Pool, head office at Red Deer, with branches at:

Alix	Edberg	Red Deer
Bentley	Elnora	Rimbey
Coronation	Olds	Rocky Mountain
Eckville	Ponoka	House (Oct. 6)

Southern Alberta Dairy Pool Limited, head office at Calgary, with branches at:

Acme	Brooks	Calgary	Hanna
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Central Creameries, head office at Calgary, with branches at:

Calgary	Red Deer	Sundre
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Crystal Dairy Limited, head office at Calgary, with branches at:

Didsbury	Lethbridge	Macleod	Medicine Hat
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Independent Creameries, Limited, head office at Innisfail, with branches at:

Bowden	Innisfail	Lacombe
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Woodland Dairy Company, Limited, head office at Edmonton, with branches at:

Calmar	Edmonton	New Sarepta	Tofield
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Other Creameries:

Athabasca Cr'y. Ltd.	Athabasca	Elk Point Cr'y.	Elk Point
Bashaw Cr'y.	Bashaw	Evansburg Cr'y.	Evansburg
Bassano Cr'y.	Bassano	Grand Centre Cr'y.	Grand Centre
Bluffton Creamery	Bluffton	High River Cr'y.	High River
Burns & Co. Ltd.	Calgary	Lac La Biche Cr'y.	Lac La Biche
Maple Leaf Cr'y. Ltd.	"	City Dairy	Lethbridge
Model Dairies	"	Purity Dairy	"
Cardston Co-op. Ltd.	Cardston	Markerville Cr'y.	Markerville
Carstairs Cr'y.	Carstairs	Nanton Cr'y.	Nanton
Castor Cr'y.	Castor	Okotoks Cr'y.	Okotoks
Claresholm Cr'y.	Claresholm	Pincher Creek Cr'y.	Pincher Creek
Clive Creamery	Clive	Fertile Valley Cr'y.	Ponoka
Cochrane Cr'y. Ass'n.	Cochrane	Red Deer Cr'y.	Red Deer
Derwent Cr'y.	Derwent	Sangudo Cr'y.	Sangudo
Donalda Co-op. Cr'y.	Donalda	Spondin Cr'y.	Spondin
Ass'n. Ltd.	Donalda	Sylvan Lake Cr'y.	Sylvan Lake
Edmonton City Dairy Co.	Edmonton	Viking Co-op. Ass'n. Ltd.	Viking
Jasper Dairy	"	Vilna Cr'y.	Vilna
South Edmonton Cr'y. Co.	"		

Cheese Factories.

There were seventeen cheese factories in operation during 1947 and the average output per factory was 181,126 pounds, an increase of 1,626 pounds over 1946. The Delburne branch

of the Central Alberta Dairy Pool did not manufacture cheese, and confined their operation to the manufacture of creamery butter.

Cheese factories again supplied large quantities of milk to the fluid milk distributors in the cities of Edmonton, Calgary and Lethbridge, which was a factor in the decrease of cheese production.

LIST OF ALBERTA CHEESE FACTORIES:

Northern Alberta Dairy Pool, Limited, head office at Edmonton, with branches at:

Bawlf	Round Hill	Leduc
Bruderheim	Thorsby	Millet

Other Cheese Factories:

Woodland Dairy Co. Limited	Glen Park
Woodland Dairy Co. Limited	Ryley
Linden Co-operative Dairy Ass'n.	Swalwell
Linden Co-operative Dairy Ass'n.	Sunnyslope
Clover Leaf Cheese Co. Ltd.	Calgary
New Coaldale Cheese Factory Co-op. Ltd.	Coaldale
Ridge Valley Co-op. Ass'n.	Crooked Creek
Neapolis Co-op. Dairy Ass'n.	Didsbury
U. I. D. Co-op. Cheese Factory	Glenwood
Mountain View Cheese Factory	Mountain View
Southern Alberta Dairy Pool Ltd.	Rosemary

Cream Quality:

The following table indicates the quality and quantity of cream delivered to Alberta creameries during 1947 with corresponding figures for previous years:

	1947		1946		1945		1939	
	Pounds	%	Pounds	%	Pounds	%	Pounds	%
Cream Received ...	78,595,677		74,363,898		83,137,769		73,530,777	
Average Test	(35.1)		(35.1)		(35.3)		(34.4)	
Butterfat:								
Table Grade	230,079 (.8)		186,663 (.7)		287,412 (1.0)		727,445 (2.9)	
Special Grade ...	14,469,231 (52.4)		13,737,178 (52.5)		15,865,791 (54.2)		17,234,846 (68.1)	
First Grade	11,455,356 (41.5)		10,754,730 (41.2)		11,693,543 (39.9)		6,625,918 (26.2)	
Second Grade ...	1,329,083 (4.8)		1,345,423 (5.2)		1,365,025 (4.7)		667,439 (2.6)	
Off Grade	133,778 (.5)		97,344 (.4)		74,806 (.2)		35,425 (.2)	
	27,617,527 (100.0)		26,121,338 (100.0)		29,286,577 (100.0)		25,291,073 (100.0)	

It will be noted the quality of cream is approximately the same as the previous year, which is considerably below the pre-war years as shown by the 1939 figures. It is estimated that the cream producers of Alberta could have received an additional \$355,000 had all the cream qualified for the top grade. Had the quality equalled that of 1939, producer returns would have been increased by \$159,000.

FEDERAL REPORT OF ALBERTA CREAMERY BUTTER GRADED

Year	Total lbs Graded	% of Make Graded	Percentage in each Grade				% 93 Score & Over
			First	Second	Third	B.T.G.	
1938	27,839,952	(89.1)	85.7	7.9	5.4	1.0	(51.4)
1940	27,243,216	(91.4)	88.1	7.1	4.4	.4	(55.8)
1942	33,614,392	(90.9)	84.1	10.2	5.0	.7	(46.4)
1944	34,797,504	(92.0)	87.0	7.0	5.7	.3	(46.0)
1946	27,842,304	(90.5)	88.4	5.5	5.7	.4	(35.4)
1947	29,066,632	(90.7)	90.3	4.3	4.9	.5	(36.4)

The percentage of butter qualifying for first grade established a new provincial record with 90.3%. This is an increase of 1.9% over the previous year and indicates exceptional work on the part of the creamery staffs. The percentage scoring 93 points or over shows a slight improvement over 1946 but is still far below that of 1940. Unquestionably, the decrease in the percentage of Special Grade cream was the principal factor respon-

sible for less 93 score butter, which is regarded as top commercial quality.

It is gratifying to report that exhibits of Alberta creamery butter won 53.3% of all prizes at the Royal Winter Fair, Toronto. The top honour for the highest scoring sample in both classes was won by the Bashaw Creamery, Bashaw.

FEDERAL REPORT OF ALBERTA CHEESE GRADED

Year	Total lbs. Graded	% of Make Graded	Percentage in each Grade			B.T.G.	% 93 Score & Over
			First	Second	Third		
1938	1,531,530	(62.5)	57.8	41.3	.7	.2	(18.7)
1940	1,935,750	(71.5)	70.6	28.4	.9	.1	(23.0)
1942	3,785,718	(96.8)	81.0	18.7	.2	.1	(43.7)
1944	3,339,147	(89.9)	79.0	20.4	.4	.2	(29.2)
1946	3,100,332	(96.0)	79.6	19.8	.4	.2	(26.9)
1947	2,928,768	(95.1)	83.9	15.6	.5	.0	(29.7)

The percentage of cheese qualifying for first grade was the highest on record, with 83.9%, showing an increase of 4.3 over 1946.

The amount scoring 93 points or over increased by 2.8%, bringing the yearly percentage to 29.7. It will be noted from the table that this figure falls far below that of 1942, when 43.7% scored 93 or over.

With the resumption of cheese classes at the Toronto Royal Winter Fair, Alberta cheesemakers submitted four entries and were successful in winning three prizes in straight placing. This is a worthy accomplishment and indicates that Alberta cheese compares favourably with the best in the Dominion.

Check Weighing of Butter

The check weighing of butter and the issuing of weight certificates was a service continued for the benefit of the butter trade. During 1947 weights were checked on 2,601 boxes, representing 1,182,776 pounds of butter.

Dairy Factory Inspection and Instruction

Inspectors of the Dairy Branch divided their time between inspection and instruction work at dairy factories, and inspection of Frozen Food Locker Plants. Reports were submitted on 1,747 dairy factory inspections, showing that grades were checked on 77,330 cans of cream and check butterfat tests were made on 24,618 shipments of milk and cream.

In the course of regular checking on condition of shipping cans in use, 508 cans were condemned as unfit for use in handling milk or cream. There has been a noticeable improvement in the condition of shipping cans during the past year. Rusty, broken and badly worn cans, detrimental to milk and cream quality, have been replaced.

For various purposes involving technological solutions to dairy factory problems, samples of raw, processed, packaged and stored dairy products were lifted and forwarded to the Dairy Branch Laboratory by inspectors. In addition, recommendations were made from these and other analyses findings which provided direction to plant personnel in processing details.

Encouragement of quality production in both raw and finished products, through further instructional guidance, was

provided through quality tests and competitions sponsored by various organizations. Performance of these tests and judging work was carried out by Dairy Branch personnel.

Diploma Course in Dairying

The second annual six months' course in Dairying was held at the University of Alberta from November 1946 to April 1947. The Dairy Branch provided personnel to assist with instructional and lecturing duties. Eleven students completed the course. R. B. Meredith secured highest standing and was awarded the Gold Medal by the Alberta Dairymen's Association. The third annual course commenced November 3rd, 1947, and as in former years the Dairy Branch is co-operating with the Department of Dairying at the University and Canadian Vocational Training.

LABORATORY SERVICES

The demand for laboratory service has been particularly heavy and for the second consecutive year a marked increase in the number of samples received for analysis is to be reported as shown by the following table giving the number and distribution of the samples submitted:

	1946	1947
Butter samples for moulds and yeasts	3,785	3,541
Water samples	24	34
Bacteriological creamery surveys	7	11
Butter samples for pH and composition	346	589
Cheese Samples	102	17
Milk samples for mastitis control service	2,500	4,555
Milk plant control service	582	2,044
Milk samples for cow testing service	4,000*	4,744
Egg melange		211
Miscellaneous	93	239
* Estimated	11,439	15,985

Through the mould and yeast count of the butter, a close check was made on the sanitation at all creameries operating in Alberta, and it is gratifying to note that some improvement in sanitation took place during the year, as has been the trend since the work commenced in 1925. The following table indicates the number of samples and classification for a period of years:

Year	No. of Analyses	Classification in Percentages			
		Excellent (0 to 10)	Good (11 to 50)	Fair (51 to 100)	Poor (Over 100)
1925	686	3.6	12.7	12.1	71.6
1930	2,799	35.7	20.3	10.3	33.7
1935	2,177	55.4	17.9	7.7	19.0
1940	3,013	64.6	16.0	7.2	12.2
1945	4,050	68.2	14.9	5.7	11.2
1946	3,785	74.9	13.0	3.9	8.2
1947	3,541	78.3	13.4	3.1	5.2

In agreement with the high standard of sanitation observed by the majority of creameries no serious difficulties were experienced from butter defects associated with faulty sanitation.

Considerable interest in composition and pH control was exhibited as shown by the very large number of samples submitted. Compared with the result obtained for the two previous years it is evident that the trend is towards greater uniformity, although there is still room for improvement along these lines.

pH Range	1945	Percentage	
		1946	1947
Over 7.7	6.6	1.6	3.5
7.3 - 7.7	16.6	27.3	19.2
6.7 - 7.2	46.3	54.8	64.5
6.2 - 6.6	25.3	14.7	11.0
Below 6.2	5.2	1.6	1.9

A pH range of 6.7 to 7.2 is generally considered most suitable for our butter, and it will be seen that approximately two-thirds of the churnings examined came within that range.

The mastitis control programme organized during 1946, and at first limited to the Edmonton Milk Shed, was extended during 1947 to include the whole province and the Veterinarians notified to that effect by circular letter of June 5th, 1947. Through the co-operation of the Veterinarians practising in the Edmonton area and the Edmonton milk distributors arrangement was made whereby the producer can obtain the service at a very reasonable cost. The following being the schedule of fees per year:

10 milking cows or less	\$40.00
11 to 25 milking cows	50.00
Over 25 milking cows	60.00

In all, 4,555 milk samples were received under the mastitis programme during 1947 and some of the early herds to join the service can already give evidence to its great value.

At the request of the Dominion Poultry and Marketing Services, since August 1st, 1947, this laboratory has given assistance to firms dealing in egg melange for which a charge is made at the rate of one dollar per sample. A total of 211 samples of egg melange were analysed.

Other services such as butterfat tests for herds on cow testing service, the propagation and distribution of starters to cheese factories, and the preparation and distribution of solutions and indicators were continued as in former years.

DAIRY CATTLE

The June 1st estimate of the Dominion Bureau of Statistics reports that 315,900 cows and heifers over two years of age were kept for milk purposes. This represents a decrease of 10,300 head or 3.2% below the revised census figure for the same date 1946. A shortage of farm labour and high prices for beef and grain were factors responsible for the decrease in dairy cattle population.

There were two outstanding herds of pure-bred dairy cattle dispersed through auction sales. The first of these took place on June 23-25 in Toronto, when Hays and Company of Calgary sold 247 head of pure-bred Holsteins at an average price of \$783.95. It was the largest sale of registered cattle ever held in Canada. Several world famous animals were sold, including the holder of world butterfat record, "Alcartra Gerben", which sold for \$11,000.00. At this sale "Sovereign Masterpiece" was purchased by the Alberta Department of Agriculture and Alberta Holstein Breeders for artificial insemination service.

On August 7, the Whitehills herd of 88 pure-bred Jerseys owned by Wright Bros. was sold at Penhold. The majority of the animals were of Island breeding, several having been imported direct from Jersey Island.



THE ALBERTA PURCHASING COMMITTEE AND "SOVEREIGN MASTERPIECE" WHOSE SERVICES ARE AVAILABLE TO ALBERTA PURE BRED HOLSTEIN BREEDERS THROUGH THE ARTIFICIAL INSEMINATION STATION AT THE OLDS SCHOOL OF AGRICULTURE, OLDS.

The following tabulation shows the average production in milk and butterfat for all Alberta cows, based upon the total quantity of milk produced and the total cows kept for milk purposes during 1947, an estimated test of 3.6% is used for butterfat calculations, and for sake of comparison similar figures for previous years are included:

	1947	1946	1945	1944	1939
Average milk production, lbs.	5381	5082	4600	4686	3903
Average butterfat production, lbs.	193.7	183.0	165.6	168.0	140.5

It is evident that the average production per cow has increased considerably in recent years and very noticeably from the pre-war years when comparisons are made with 1939. These figures depend to a large extent on estimates, not only for dairy cattle numbers during inter census years, but also for milk used on the farm, including dairy butter and farm cheese, and if any one of these estimates were in error it affects the average production considerably. However, there has been a noticeable improvement in the productivity of the dairy cattle and this will, to a large extent, tend to place dairying on a more profitable and permanent basis.

Cow Testing and Herd Improvement

The cow testing service offered to all herd owners in the province was continued throughout the year. There are two plans now in operation.

Plan 1:

The herd owner weighs each milking of every cow in the herd and submits to the testing centre, once a month, a representative

sample of milk from each cow, together with individual production totals.

Plan 2:

The herd owner weighs one day's production of every cow in the herd, and submits these weights together with a representative sample of milk from each cow to the testing centre once a month. The monthly production is then computed from the one day's weighing.

Testing Centres.

There are three testing centres in operation for the testing of milk samples from herds on the service, namely, the Dairy Laboratory, Edmonton; Olds School of Agriculture, Olds; and the office of the Dairy Branch Inspector, Camrose.

The following table indicates the number of herds and cows under test at each centre.

	No. of herds	No. of Cows
Edmonton	43	670
Olds	31	447
Camrose	22	252

Field Visits.

During the year, the majority of the herds under test were visited. Assistance was given in analyzing the information obtained from their testing programme in order that sound breeding, selection, and feeding practices could be adopted. Milk scales were checked, and the herd owners instructed in the proper milk sampling procedure to ensure accurate records being obtained.

The following tabulation sets forth the average production of the herds under test, and also the extent to which the service was utilized. For the sake of comparison, figures for the past two years have been included.

	Plan 1	1947 Plan 2*	Total	1946	1945
Number of herds under test	82	14	96	86	89
Number of cows under test	1,092	277	1,369	1,145	1,178
Herd averages on the basis of cow years (T)					
Number of cow years	782.07	156.92	938.99	830.40	593.55
Average production of milk (lbs.)	8,637	8,317	8,583	8,663	8,529
Average production of butterfat (lbs.)	323.2	316.3	322.0	332.1	315.7
Average test (per cent)			3.75	3.83	3.71

*Plan 2 figures available only for the year 1947 as this system of testing was inaugurated late in 1946.

(T) The total number of cows on test during the year is used in determining the herd average; except where new cows are placed on test, or a cow is sold or dies, in which case only that part of the year in which she produces is used.

The comparable figures to the years 1945 and 1946 for all cows are given under the heading "total" in the above table.

There are 10 more herds and 224 more cows under test during 1947 than in the previous year.

The average production of milk and butterfat per cow showed a slight decrease under 1946; but higher than in 1945.

Certificates were issued for cows attaining a certain standard of butterfat production and numbers issued are listed below:

	1947	1946	1945
Gold Seal	56	81	54
Red Seal	216	241	212
Blue Seal	263	308	304
Green Seal (Plan 2)	42		
Statements	83	72	97
Total	<u>660</u>	<u>702</u>	<u>667</u>

It will be noted there was a decreased number of certificates issued during the year as compared to the previous year. This is due mainly to a change in regulations whereby all lactations are now on the basis of 305 days instead of a full year. Many of the records which would normally have been completed to show in this year's figures were thus included in the 1946 total. It must also be kept in mind that the requirements have increased due to the 305-day basis for certificates instead of the same production for the longer period of 365 days as was the case in former years.

There was an increase in the number of herds of five cows or more qualifying for the Honour Roll, with an average of over 300 lbs. of butterfat per cow. There are 53 herds as compared to 49 in 1946 included in this list.

HONOUR ROLL, 1947

Name	Address	No. of Cows	Ave. Lbs. Butterfat
Alexander, W. W.	Picture Butte	12	400.4
Black, W.	Camrose	5	443.8
Bailey, W. L.	Wetaskiwin	15	396.9
Bajema, A. J.	Blackfalds	7	392.8
Bajema, J. A.	Blackfalds	7	353.0
Bacon, J. Ross	North Edmonton	18	303.2
Boulter, L. F.	Rosalind	10	309.3
Choice Dairy	Medicine Hat	27	437.4
Carter, M. L.	Ponoka	44	340.9
Dowdell, W. C.	Millet	24	369.3
Dunn, T.	Airways	10	475.0
Echlin, L.	Olds	12	318.5
Erickson, J.	Bentley	15	370.1
Forbes, Wm. C.	Innisfail	6	300.6
Flach, C. J.	Opal	17	366.5
Fulks, S. R.	Waskatenau	7	502.2
Gould, S. P.	Rosalind	10	345.5
Haines, J.	Millet	5	381.7
Hoeve, J.	Lacombe	13	361.7
Hudd, C. J. and W. A.	Lacombe	23	313.3
Jean, Hector	Lafond	5	374.7
Jones, D. C.	Leduc	22	497.2
Kauffmann Bros.	Tofield	13	517.2
Koetke, O. H. F.	Holden	19	329.8
Kamps, A.	Lacombe	21	338.5
Meyers, G. P.	Millet	9	468.4
Magnesson, E.	Ryley	19	332.2
Nichols, R. A.	Rosalind	13	322.2
Quail, H. W.	Round Hill	19	340.0
Quantz, A. G.	Innisfail	5	340.5
Parker, B. T.	Didsbury	8	485.9
Robertson, J. G.	Camrose	19	324.8
Roth, C. C.	Rochford Bridge	11	319.3
Rude, E. J.	Tofield	12	317.0
Rogers, J.	Lacombe	17	444.5
Rodwell, T. C.	Tees	7	300.7
Spady, J. C.	Wainwright	24	371.0
Smith, W. M.	Didsbury	8	320.3
Stannard, G. H.	S. Edmonton	32	369.3
Stannard Bros.	S. Edmonton	40	387.6
Stelfox, A. E.	Daysland	7	322.0
Stevenson, Mrs. V.	Rimbey	8	401.3
Schubert, Hans P.	New Sarepta	10	365.0
Stad, Reinder	Greencourt	8	305.0
Thesberg, N.	Markerville	10	324.1
Thomsen, Hans	Lousana	9	324.5
Vermilion School of Agriculture	Vermilion	22	324.8
Wilkinson, C. H.	Clover Bar	17	399.1
Winsness, Wm.	Ryley	21	323.4
Webb, Claude	Swalwell	17	408.6
Westmancoat, R. K.	Ryley	10	403.9
Webb, George	Lethbridge	48	434.9
Woolfrey, W. A.	Medicine Hat	22	439.3

DAIRY COST STUDY

As was the case during the past three years, the Dairy Cost Study and Farm Business Service continued under the sponsorship of the Provincial Department of Agriculture and the Board of Public Utility Commissioners. Headquarters for these studies continued at the University in order that collaboration could be facilitated with the University and Dominion Economics Divisions.

Cost accounts were continued among three groups of producers representative of the fluid milk shippers to the principal markets—Edmonton, Calgary and Lethbridge. The Cost Study was introduced to a new area, namely, Medicine Hat. In addition to the above groups accounts were closed for the group of churning cream and condensery shippers in the Red Deer area. For the coming year it is likely that accounts will be set up for a group of churning cream and cheese factory shippers in another area. This would furnish a new group of dairymen with farm management and business analysis of their farming practices.

The reports prepared, this year, for farmers keeping accounts, followed the pattern of the previous year. Three reports for the Edmonton, Calgary and Red Deer groups were published in booklet form entitled "Dairy Farm Summary, 1945-46" and numbered 1, 2 and 3 for the respective groups mentioned above.

These summaries gave a fairly complete analysis of the labour earnings, management factors affecting income, and production costs for the year under review. Data were presented for each individual farm, with comparative figures for the group average and the two high income farms. Group averages for the period of years in which that group had been studied were also included for the herd owner's information. Illustrations and Charts in addition to the tables were used to emphasize the wide variations in costs as factors varied for different classes of farms.

A brief report was issued to the nine dairy farmers keeping cost accounts in the Lethbridge area. This report covered labour earnings, cost per pound butterfat and the level of efficiency shown by the five factor analysis consisting of live stock, crops, labour, capital and size of business.

While this information was issued primarily for the benefit of those farm owners co-operating by keeping accounts, it was also made available to the local Milk Producer organizations, as well as government agencies for policy guidance and extension use.

Two public hearings to establish milk prices have been held in just over a year which required extra time for the supervisor to secure certain information prior to normal proceedings. It has been customary to close the yearly cost accounts during the summer and work out the results the following winter. This causes considerable delay before results are known and experience has shown that production cost information to establish milk prices is required during the fall rather than the following spring. If additional technical assistance were provided it would not only make available a summary of results for fall hearings; but a larger sample of farms could be studied in the two major milk markets of Edmonton and Calgary. The larger sample of farms would make it possible to establish a formula from which could be determined costs with a fair degree of accuracy. This formula would supply the quantitative factors which could be applied to any price change.

The following table records the results for the various

efficiency factors for the groups under study during 1945-46 and includes the averages for the period each group has been studied—in the case of Edmonton whole milk a 7-year average, Calgary whole milk 5 years, and the Red Deer group of condensery and churning cream shippers 4 years:

Table showing summary of results analysed from the cost studies:

Item	Market Groups			
	Edmonton Whole- Milk	Calgary Whole- Milk	Lethbridge Whole- Milk	Red Deer Churning Cream and Condensery
Receipts per lb. butterfat—				
Average of 1 yr. to May 1946	¢ 87.7	82.3	86.4	51.0
Average over a period of years ¹	¢ 71.8	76.2	.....	49.5
Cost per lb. butterfat—				
Average of 1 yr. to May 1946	¢ 82.1	78.4	80.9	69.5
Average over a period of years ¹	¢ 65.2	69.0	.....	67.4
Returns per man hour chores—				
Average of 1 yr. to May 1946	¢ 53.4	59.3	59.3	23.8
Average over a period of years	¢ 42.2	51.9	.....	20.1
Returns per \$100 dairy feed—				
Average of 1 yr. to May 1946	\$ 221	231	252	208
Average over a period of years	\$ 242	248	.....	210
Number of cows per farm—				
Average of 1 yr. to May 1946	cows 26	39	38	11
Average over a period of years	cows 23	35	.....	12
Per cent Receipts from Dairy—				
Average of 1 yr. to May 1946	% 69	73	72	42
Average over a period of years	% 64	71	....	37
Crop Acres—				
Average of 1 yr. to May 1946	acres 257	189	225	201
Average over a period of years	acres 252	188	.....	220
Productive Man Work Units per man ² —				
Average of 1 yr. to May 1946	p.m.w.u. 320	370	279	245
Average over a period of years	.....	.....	.....	.....
Hours of labour per lb. butterfat				
Average of 1 yr. to May 1946	hours 0.6	0.6	0.6	1.0
Average over a period of years	hours 0.7	0.7	....	1.1
Labour Earnings—				
Average of 1 yr. to May 1946	\$ 1680	2246	1801	658
Average over a period of years	\$ 1735	2378	.....	981

1 Averages over a period of years—Edmonton 7 years, 1939-46; Calgary 5 years, 1941-46; Red Deer 4 years, 1942-46.

2 Productive man work units per man represent the number of 10-hour days that would be required, per man, under average conditions, to care for the acreage of crops and the number of live stock kept.

It will be noted that the production per cow is higher for the Edmonton group than the Calgary group. The difference between the Edmonton group and those shipping churning cream or condensery milk is more pronounced. This is partly due to the Edmonton group feeding larger quantities of grain and providing more alfalfa for hay and pasture. The other areas depend to a greater extent on wild pasture, prairie hay and green feed.

Several interesting findings regarding labour have shown up each year for the various market groups. It has been shown that the time required to produce a pound of butterfat for those market groups under study has been reduced since the introduction of the studies. Factors which assist in a higher output of butterfat per man hour of labour is the use of the milking machines, of high producing cows, of a larger herd, and a barn and farm plan laid out to save steps. Farms installing electricity and water pressure systems cut down in chore labour and increase the over-all efficiency in care of the herd.

Many farms which had the well and milk house too far from the barn for greatest labour efficiency are now correcting the situation. The impracticability of drilling a well close to the barn, because of high cost of a deep well, can now be overcome by bringing the water under pressure from the present well.

It, then, becomes more feasible to re-locate the milk house to adjoin the barn. The water pressure system provides not only water for the milk house in its new site, but also the advantages of having water in front of the cows at all times.

FROZEN FOOD LOCKER PLANTS

Continued progress in the establishment of Frozen Food Locker Plants was evident during 1947. Seventeen new plants were put into operation, bringing the total to 100, with 97 reporting 28,109 lockers available at the end of the year. This compares with 83 plants and 22,421 lockers available at the end of 1946. In addition to the 100 locker plants, three Animal Food Cold Storage Plants were licensed under the Act to freeze and store animal food exclusively.

While the majority of plants are established in the southern part of the province, it is interesting to record that of the 18 applications approved for future construction, practically all are for points in Northern Alberta. The Peace River district has two plants in operation and two more under construction.

To make provision for the extra demand for refrigerated space in some districts, certain plants were rebuilt while others were enlarged and altered during the year.

Inspectors of the Dairy Branch made 391 inspections of Frozen Food Locker Plants during the year. The standard of service has shown improvement in the majority of plants and regulations under the Act have been carefully followed. In addition to the inspection service, the Dairy Branch gave considerable assistance to those districts where new plants were put into operation. This assistance was given by the Supervisor of Frozen Food Locker Plants, assisted by the local District Home Economist, and took the form of a lecture and demonstration dealing with the preparation and packaging of food for freezing. Information on the recommended varieties of vegetables for freezing and a motion picture in sound completed most meetings that were attended by a large and interested audience.

The third Annual Convention of the Alberta Cold Storage Locker Association was held in Calgary, March 3rd and 4th, 1947. The addresses and demonstrations were well received by an enthusiastic group of operators, as well as prospective operators. The Association made an important change in its constitution during the Convention by changing its name to the "Alberta Quick Freeze Locker Plant Association".

The Bruce Robinson "Merit Award Shield" and cash prizes for the most ideal locker plant operating during 1946 were awarded at the Convention. First prize was won by the Frozen Food Locker Co., Edmonton, J. D. Wolch, Manager; with Jensen's Frozen Foods, Lethbridge, and Taber Frozen Foods, Taber, winning Second and Third Prizes, respectively. The scoring of all plants was done by officials of the Dairy Branch.

Following is a list of all Frozen Food Locker Plants operating as at November 30, 1947. New Plants put into operation during the year are marked ‡.

Name of Plant	Location	Name of Plant	Location
Fischer's General Store	Acme	Athabasca Frozen Food	
‡Airdrie Locker Plant	Airdrie	Locker Plant	Athabasca
Alix Locker Plant	Alix	Barnwell Locker Plant	Barnwell
Pioneer Meat Market	Alliance	‡Barons Locker Plant	Barons

Bashaw Meat Market	Bashaw	Beiseker Cold Storage Lockers	Irricana
Beiseker Cold Storage Locker Plant	Beiseker	†Killam Locker Plant	Killam
Bentley Cold Storage	Bentley	Lacombe Cold Storage	Lacombe
Berwyn Locker Plant	Berwyn	Pat's Meat Market	Leduc
High River Lockers Ltd.	Blackie	Jensen's Frozen Foods	Lethbridge
Emsland & Son	Bowden	Crystal Dairy Ltd.	Lethbridge
†Bow Island Lockers	Bow Island	Purity Dairy	Lethbridge
Brooks Marketeria & Lockers Ltd.	Brooks	Dixon's Meat Market	Macleod
†Calgary Cold Storage	Calgary	Magrath Co-op. Locker Ass'n.	Magrath
Campbell & Griffin	Calgary	†Len's Locker Plant	Manville
Crystal Dairy Limited	Calgary	Crystal Dairy Ltd.	Medicine Hat
Alberta Locker Service	Calgary	Western Locker Storage	Medicine Hat
Duggan's Foodland	Camrose	†Gust's Food Store	Medicine Hat
Carbon Locker Storage	Carbon	Nelson's Locker Storage	Milk River
Cardston Cold Storage	Cardston	Moen's Locker Storage & Grocery	Millet
Holmes' Cold Storage Lockers	Cardston	†Labonte's Meat Market	Morinville
Friglok Cold Storage	Carstairs	Morrin Locker Storage	Morrin
Champion Meat Market	Champion	Denoon's Meat Market	Nanton
Claresholm Locker Plant	Claresholm	High River Lockers	Okotoks
Clive Cold Storage Lockers	Clive	†Olds Cold Storage Lockers	Olds
Coaldale Meat Market	Coaldale	Picture Butte Cons. Co-op. Ass'n.	Picture Butte
New Coaldale Co-op. Cheese Factory	Coaldale	Pincher Creek Creamery	Pincher Creek
†Cochrane Locker Plant	Cochrane	Ponoka Cold Storage	Ponoka
Coronation Cold Storage	Coronation	Sturdy Bros.	Provost
Citizen's Lumber Co.	Coutts	Raymond Co-op. Cheese Factory	Raymond
Holmes' Cold Storage Lockers	Crossfield	Red Deer Cold Storage	Red Deer
Delburne Meat Market	Delburne	Red Deer Creamery	Red Deer
†Christenson Bros.	Dickson	Central Alberta Dairy Pool	Rimby
Crystal Dairy Ltd.	Didsbury	Rockyford Meat Market	Rockyford
Drumheller Cold Storage	Drumheller	Brooks Marketeria & Lockers	Rosemary
Eckville Co-op. Ass'n.	Eckville	Strathmore Cold Storage	Standard
Frozen Food Locker Co.	Edmonton	Staveley Cold Storage Lockers	Staveley
Edmonton Cold Storage Ltd.	Edmonton	Stettler Co-op. Ass'n. Ltd.	Stettler
†Fairview Co-op. Refrig. Locker Assn.	Fairview	†Stony Plain Co-op. Ass'n.	Stony Plain
Brown's Frozen Foods	Foremost	Strathmore Cold Storage	Strathmore
†Albert Park Lockers	Forest Lawn	†Central Creameries	Sundre
Fort Lockers	Fort, Sask.	Taber Frozen Foods	Taber
Galahad Meat Market	Galahad	Three Hills Locker	Three Hills
Strathmore Cold Storage	Gleichen	Central Meat Market	Trochu
Cold Storage Lockers	Glenwood	Turner Valley Lockers	Turner Valley
Grande Prairie Meat Market	Grande Prairie	†Two Hills Lockers	Two Hills
Granum Meat Market	Granum	Vegreville Cold Storage	Vegreville
Hanna Co-op. Ass'n.	Hanna	Viking Meat Market	Viking
High River Lockers Limited	High River	Central Meat Market	Vulcan
Strathmore Cold Storage	Hussar	Mac's Grocery & Cold Storage Lockers	Warner
Innisfail Dist. Co-op. Ass'n.	Innisfail	Westlock Locker Plant	Westlock
		Wetaskiwin Cold Storage	Wetaskiwin

ANIMAL FOOD COLD STORAGE PLANTS:

Canyon Creek Cold Storage Ltd.	Canyon Creek
National Produce Company, 9943 - 82nd Ave.	Edmonton
Northern Refrigeration Association	Lac La Biche

The following tabulation is a summary of the information received from monthly reports and covers the period December 1st, 1946, to November 30th, 1947. For the sake of comparison, similar information for the same period the previous year has been included:

	1946	1947
	Pounds Percent	Pounds Percent
Fresh Meats	3,914,406 75.7	5,790,273 74.4
Fish	48,669 1.0	61,723 .8
Poultry	341,894 6.6	493,150 6.3
Game Birds	41,397 .8	51,952 .7
Big Game	89,045 1.7	116,061 1.5
Lard Rendered	36,577 .7	90,717 1.2
Cured Meats	469,199 9.1	935,413 12.0
Fruits	118,685 2.3	102,726 1.3
Vegetables	88,957 1.7	100,290 1.3
Miscellaneous	22,197 .4	40,114 .5
	<u>5,171,026</u> <u>100.0</u>	<u>7,780,780</u> <u>100.0</u>
		1946 1947
Number of plants reporting		83 97
Number of lockers installed		22,421 28,109
Average Number of lockers installed		270 290
Number of lockers rented at December 1st		18,640 25,241
Percentage of lockers rented at December 1st		83.1 89.8
Average lbs. of food stored per locker with complete service		337 332.4

Lbs. of food stored per locker without complete service	149	165.6
Average poundage per locker, all plants	277.4	308.3
Average poundage per locker for average of lockers rented, 12 months .....	.....	348
Inspections during 1947	270	391

DAIRY STATISTICS

The following tables are included for general information:

ALBERTA MILK PRODUCTION AND UTILIZATION

Year	Total Milk Production in Million lbs.	Percentage of Milk Used					Fed Farm Animals
		Creamery Butter	Dairy Butter	Factory and Home Made Cheese	Miscel. Factory Products	Milk and Cream Consumed	
1920	784	35.9	27.8	1.6	.9	34.8*	
1925	923	50.6	24.5	1.7	.5	22.7*	
1930	1,077	38.5	25.8	1.2	.9	25.1	8.5
1935	1,384	39.1	22.0	1.3	.4	25.6	11.6
1940	1,671	41.8	21.0	2.0	1.5	24.9	8.8
1945	1,731	46.9	12.1	2.7	2.3	26.7	8.8
1946	1,658	43.5	13.0	2.3	2.6	29.3	9.3
1947	1,700	44.2	13.1	2.2	3.2	28.3	9.0

*Includes Milk otherwise used.

CREAMERY BUTTER PRODUCTION
(By Years)

Year	Creameries	Pounds Butter	Av. Output per Creamery	Selling Value	
				Total	Cents per lb.
1920	53	11,821,291	223,043	\$ 6,555,509	(55.45)
1925	99	19,630,101	198,284	6,959,059	(35.45)
1930	92	17,716,744	192,573	4,968,227	(28.04)
1935	97	23,094,707	238,090	4,588,917	(19.90)
1940	95	29,796,520	313,647	6,647,604	(22.31)
1945	91	34,692,917	381,241	11,389,875	(32.83)
1946	92	30,744,000	334,174	11,440,000	(37.21)
1947 Prelim.....	91	32,068,000	352,393	16,355,000	(51.00)

CREAMERY BUTTER PRODUCTION
(By Months)

	1946 Pounds	1947 Pounds	% x Increase - Decrease
January	1,495,252	1,305,867	- 12.7
February	1,426,604	1,316,583	- 7.7
March	1,689,746	1,669,704	- 1.2
April	2,168,970	2,049,603	- 5.5
May	3,475,805	3,435,179	- 1.2
June	4,694,096	4,608,607	- 1.8
July	5,151,044	4,841,155	- 6.0
August	4,331,285	4,124,254	- 4.8
September	1,515,820	3,289,929	x117.0
October	2,058,267	2,403,117	x 16.8
November	1,499,220	1,595,817	x 6.4
December	1,237,648	1,427,991	x 15.4
	30,743,757	32,067,806	x 4.3

CREAMERY BUTTER PRODUCTION
(By Regional Divisions)

	1946 Pounds	1947 Pounds	%
Northern	14,434,903	15,227,107	x 5.5
Central	10,785,502	11,214,657	x 4.0
Southern	5,523,352	5,626,142	x 1.9
	30,743,757	32,067,806	x 4.3

DEPARTMENT OF AGRICULTURE

FACTORY CHEESE PRODUCTION
(By Years)

Year	Factories	Pounds	Av. Output	Selling Value	
		Cheese	per Factory	Total	Cents per lb.
1920	7	398,750	56,964	\$ 110,355	(27.70)
1925	14	1,473,835	105,274	306,604	(20.80)
1930	8	1,035,352	129,419	175,392	(16.94)
1935	11	1,364,526	124,048	168,280	(12.33)
1940	18	2,705,853	150,325	385,584	(14.25)
1945	18	3,985,160	221,398	903,309	(22.67)
1946	18	3,231,000	179,500	746,000	(23.09)
1947 Prelim.....	17	3,079,000	181,126	893,000	(29.00)

FACTORY CHEESE PRODUCTION
(By Months)

	1946	1947	%
	Pounds	Pounds	x Increase - Decrease
January	205,723	170,859	- 16.9
February	181,812	169,985	- 6.5
March	241,212	218,998	- 9.2
April	275,779	244,668	- 11.3
May	372,877	378,789	x 1.6
June	459,922	452,250	- 1.7
July	469,707	410,065	- 12.7
August	387,324	346,972	- 10.4
September	189,568	268,844	x 41.8
October	176,124	194,586	x 10.5
November	122,756	111,157	- 9.4
December	147,966	111,967	- 24.3
	3,230,770	3,079,140	- 4.7

ESTIMATED SPECIAL GRADE BUTTERFAT PRICES
(F.O.B. SHIPPING POINT)
(By Months)

	1947		1946		1945		1944	
	Cents	%	Cents	%	Cents	%	Cents	%
January	38.5	(4.0)	33.10	(4.9)	32.7	(4.8)	32.2	(4.8)
February	38.5	(4.8)	33.10	(5.2)	32.7	(5.2)	32.5	(5.2)
March	38.5	(5.3)	33.10	(5.7)	32.7	(6.1)	32.5	(6.0)
April	38.5	(6.5)	38.10	(7.1)	32.7	(7.0)	32.5	(7.5)
May	50.0	(10.2)	37.10	(11.1)	32.7	(9.2)	32.0	(10.6)
June	50.6	(14.6)	36.10	(15.8)	31.95	(14.3)	31.5	(14.4)
July	52.9	(14.6)	36.85	(16.0)	32.45	(14.6)	32.0	(14.1)
August	56.9	(12.7)	38.10	(13.8)	32.7	(12.6)	32.5	(12.2)
September	62.4	(10.3)	38.10	(5.0)	32.7	(10.0)	32.5	(9.1)
October	61.65	(7.4)	38.10	(6.5)	32.95	(7.0)	32.7	(6.8)
November	62.25	(5.3)	38.10	(4.9)	33.45	(4.9)	32.7	(5.1)
December	68.25	(4.3)	38.10	(4.0)	33.45	(4.3)	32.7	(4.2)
The Year	51.53	(100.0)	36.51	(100.0)	32.67	(100.0)	32.28	(100.0)

The estimated average prices paid for Special Grade butterfat during 1944, '45, '46 and '47 do not include the Dominion Government Subsidy.

During 1944, '45, '46, and up to April 30, 1947, a subsidy of 10¢ per pound butterfat was in effect.

NOTE: The figures enclosed in brackets represent the monthly percentages of the cream receipts for the year.

TOTAL VALUE OF DAIRY PRODUCTS
(By Years)

Year				
1900	\$	546,476	1935	\$14,252,500
1910		7,855,761	1940	19,532,344
1915		15,896,586	1945	34,583,305
1920		34,000,000	1946	36,900,000
1925		23,002,000	1947 Preliminary ..	46,739,000
1930		18,675,500		

TOTAL COWS FOR MILK PURPOSES

Year	Cows	Year	Cows
1901	46,101	1931	385,000
1906	101,235	1936	458,200
1911	147,687	1940	416,800
1916	277,324	1945	376,400
1921	432,838	1946	326,200
1926	436,500	1947	315,900

STATISTICAL DATA RELATING TO MILK CONTROL
Submitted by the
BOARD OF PUBLIC UTILITY COMMISSIONERS
(A. T. NEALE, Supervisor)

The tables which follow relate to milk and cream supplied and sold for fluid consumption in the areas of the Province controlled by the Board of Public Utility Commissioners during the year 1947.

TABLE 1.
PER CAPITA CONSUMPTION OF FLUID MILK, IN PINTS
MONTHLY FOR 1947

(To Include Cream Consumption Converted to Milk Equivalent.)

Area	PINTS (PER DIEM)											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary	1.055	1.098	1.102	1.125	1.118	1.126	1.096	1.070	1.044	1.055	1.071	1.087
Edmonton	1.084	1.134	1.164	1.157	1.133	1.069	1.069	1.027	1.067	1.103	1.128	1.129
Lethbridge	1.04	1.07	1.07	1.17	1.28	1.21	1.17	1.16	1.10	1.06	1.06	1.06
Medicine Hat..	.88	.85	.91	.95	.96	.92	.92	.88	.92	.95	.93	.92

TABLE 2
CONSUMPTION OF FLUID MILK MONTHLY, 1947—IN QUARTS

Area	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary	1,213,051	1,136,074	1,267,268	1,218,062	1,262,685	1,187,035	1,222,824	1,184,345	1,144,359	1,203,170	1,179,089	1,219,119
Edmonton	1,504,905	1,397,706	1,455,877	1,492,500	1,596,386	1,405,525	1,446,368	1,357,831	1,394,818	1,490,790	1,456,424	1,504,974
Lethbridge	133,626	132,241	208,488	206,920	218,898	197,373	207,803	203,364	201,281	203,975	193,454	194,300
Medicine Hat	148,218	136,951	149,673	148,475	149,673	146,670	155,182	147,210	149,467	157,829	144,116	145,200

TABLE 3
CONSUMPTION OF FLUID CREAM MONTHLY, 1947—IN QUARTS

Area	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary	134,628	127,448	140,444	138,842	136,826	143,559	137,399	138,184	123,147	124,114	122,438	133,784
Edmonton	142,088	135,219	151,846	156,874	183,714	127,265	133,844	137,870	133,035	142,002	145,201	150,041
Lethbridge	18,347	14,092	16,537	21,583	19,808	17,486	15,862	17,074	17,544	16,464	16,933	17,000
Medicine Hat	8,340	5,074	9,212	8,674	8,103	7,896	7,690	7,086	7,073	8,641	9,342	9,342

TABLE 4
FLUID CONSUMPTION 1943 - 1947—IN QUARTS

Area	1943	1944	1945	1946	1947
Calgary	14,026,370	14,883,161	14,718,119	15,138,343	14,437,081
Edmonton	15,831,989	16,585,994	17,046,833	18,515,522	17,875,803
Lethbridge	1,989,889	2,203,781	2,333,010	2,306,947	2,422,713
Medicine Hat.....		NO RECORD			1,776,904
Totals	31,848,248	33,672,936	34,097,962	36,460,812	36,212,501

TABLE 5
FLUID CREAM CONSUMPTION 1943 - 1947—IN QUARTS

Area	1943	1944	1945	1946	1947
Calgary	1,019,296	1,263,110	1,315,726	1,519,581	1,600,813
Edmonton	1,288,231	1,467,631	1,478,393	1,632,854	1,710,999
Lethbridge	129,419	157,789	159,958	184,753	208,730
Medicine Hat.....		NO RECORD			96,473
Totals in Qts.	2,436,946	2,888,530	2,954,077	3,337,188	3,617,015
Totals in B. F. Equivalent lbs.	728,347	820,484	759,458	837,013	1,401,535

TABLE 6
FLUID MILK PURCHASES BY DISTRIBUTING PLANTS
1943 - 1947—IN POUNDS

Area	1943	1944	1945	1946	1947
Calgary	41,437,886	46,363,477	46,982,078	48,220,977	47,943,162
Edmonton	40,097,468	43,135,693	43,673,442	51,149,051	51,191,446
Lethbridge	*11,776,105	*10,623,093	*9,534,137	†6,724,565	†7,016,653
Medicine Hat.....		NO RECORD			4,626,413
Total lbs.	93,311,450	100,112,263	100,189,657	106,094,593	110,777,674

*Includes Milk for Military Personnel

†City Milk Only.

TABLE 7
SUMMARY OF MILK AND CREAM PRODUCERS OPERATING ON
DECEMBER 31ST, 1947, UNDER BOARD OF PUBLIC
UTILITY COMMISSIONERS' LICENSE

Controlled Area	Milk	Cream	Total
Calgary	234	43	277
Camrose	9	1	10
Crows Nest Pass	12	...	12
Edmonton	283	33	316
Lethbridge	33	...	33
Medicine Hat	40	...	40
Ponoka	2	...	2
Red Deer	28	7	35
Totals	641	84	725

TABLE 8
SUMMARY OF MILK AND CREAM DISTRIBUTORS OPERATING ON
DECEMBER 31ST, 1947, UNDER BOARD OF PUBLIC
UTILITY COMMISSIONERS' LICENSE

Controlled Area	Milk	Cream	Total
Bowden	1	—	1
Calgary	5	3	8
Camrose	2	...	2
Crows Nest Pass	1	...	1
Edmonton	14	...	14
Lethbridge	2	...	2
Medicine Hat	5	1	6
Ponoka	1	...	1
Red Deer	2	...	2
Totals	33	4	37

TABLE 9

MILK AND CREAM PRICES AS EFFECTIVE DECEMBER 31ST, 1947

Controlled Area	MILK		CREAM		
	To Pro-	To Con-	10% Sub-	18% Table	32-34% Whipping
	ducers Per 100 lbs. (3.6 % B.F.)	sumers Per Qt.	standard Per Pint	To Consumers: Per Pint	Per Half Pint
	\$	¢	¢	¢	¢
Calgary	3.35	14	18	32	25
Camrose	3.03	13	..	29	—
Crows Nest Pass	3.49	15	18	32	25
Edmonton	3.35	14	18	32	25
Lethbridge	3.30	14	18	32	25
Medicine Hat	3.30	14	18	32	25
Ponoka	3.03	13	..	29	20
Red Deer	3.03	13	..	29	20

TABLE 10

COMPARISON OF PURCHASE AND RE-SALE PRICES OF MILK
AND MILK PRODUCTS, AS EFFECTIVE DECEMBER 31ST, 1947

PURCHASE PRICE		RETAIL SALE PRICES				
Province	City	Per 100 lbs. basis 3.6 % B.F.	Milk Per Qt.	Cream Sub- Standard Per Pt.	Butter- milk Per Qt.	Chocolate Dairy Drink Per Qt.
		\$	¢	¢	¢	¢
British Columbia	Vancouver	3.51½	15	18	13	16
†Alberta	Edmonton	3.35	14	18	13	15
Saskatchewan	Regina	3.90	16	19	16	18
†Manitoba	Winnipeg	4.08	16	20	12	18

†Applications for price increases now before these Boards: upward adjustments anticipated, effective in January, 1948.

REPORT OF THE POULTRY BRANCH

(C. W. Traves, Poultry Commissioner)

The poultry industry of Alberta commenced 1947 on a note of confidence and finished the year on a note of perhaps the most extreme uncertainty that it has experienced for many years. A great deal of credit is due to all those connected with the industry, especially the producers, for keeping a level head and maintaining production in the face of conditions that changed suddenly from one of profit to one of little, if any, profit and uncertainty as to the future.

Every assurance was received from Ottawa that the egg contracts with Britain were to be extended from the yearly to a long-term basis and that any necessary price adjustments, up or down, would be negotiated to the satisfaction of both countries. Undoubtedly, Britain could take all of Canada's surplus shell eggs, sugar dried egg powder, and an increased amount of frozen egg melange. The prospects were that Britain would require even greater amounts than Canada could supply. Britain was taking some poultry meats and we were told that this was just the beginning. As pointed out in our 1946 report, egg contracts had been signed for all the eggs we could produce till January, 1949, and that it was expected that the 1950 and 1951 contracts would be completed in the near future.

Production costs continued to show a steady upward trend and the scarcity of supplemental feeds, especially animal proteins, continued. Due to the increased feeding costs the egg contracts were re-negotiated and the higher price obtained added a great stimulus to the industry. Britain emphasized the need of a very material increase in the quantity of our fall and winter fresh shell eggs if we were to expect her to take our surplus spring and early summer production. Producer groups, hatcherymen, feed dealers and others got behind a very intensive campaign for February and March hatched chicks in order to comply with the need for a greater quantity of fall and winter fresh eggs. The results of the campaign were even better than the most optimistic had hoped for.

Throughout the year the domestic markets for eggs and poultry meats continued firm. The discontinuance of the two meatless days per week had little, if any, effect upon domestic consumption of eggs and poultry meats. It appears that the Canadian housewife is "sold" on eggs and poultry.

World conditions are such that there should be a ready market for Canadian eggs for many years to come. Eggs are one of the complete protective foods so vitally needed in many countries to-day. Unfortunately, the science of distribution and financing, especially financing, has fallen far behind the science of production.

Egg Production

Although the production of chicks was down in 1946 as compared with 1945, egg production held up very well during the spring and summer of 1947 due to the carrying over of large num-

bers of yearling birds than was the usual practice, and the continued high standard of feeding and management given the laying flocks.

The early chick campaign mentioned previously gave all of Canada, and Alberta in particular, a record number of early hatched pullets. Many of our pullets commenced to lay during July and August, with the result that by the time the new contract prices came into effect September 1st a large number of pullets were in full lay. Egg deliveries for the fall and winter contracts were above all expectations. Our grading stations and marketing facilities had been steadily improved and were able to handle the volume quite easily. The industry encountered three major problems during the year. The first was a decrease in the yield of coarse grain, the second the dollar collapse in Britain, and the third was the removal of feeders' subsidies and price controls on oats and barley.

Since these problems did not develop until after a large percentage of the pullets were actually well into the lay or at least ready to lay, the effect on producers was not as bad as it might have been. With the pullets at the point where they were showing revenue as against several months of rearing costs, producers appeared to have only one alternative, hold on and see what happened. Although some pullets were marketed, the quantity was very small. Alberta's egg production from September through December exceeded all records, a really creditable showing on the part of our thousands of producers, small and large alike.

Dressed and Live Poultry

As with 1946, we started out without any appreciable quantities of dressed poultry in storage. What there was consisted of large sized imported turkeys that had not found a ready market and a back-log of storage stocks of chicken and fowl built up at the request of Ottawa officials.

As stated previously, Canada was shipping some dressed poultry to Britain; in fact, she had a contract for about 12,000,000 pounds. Every indication was given that the contract would be renewed for increased quantities, and meetings were held across Canada to explore ways and means of seeing that Britain could be assured of an increased volume of poultry. Within two weeks of the last meeting word was received that no more poultry at any price would be taken. This was our first indication that Britain could not carry on the existing dollar basis and we soon heard that the egg contracts were in danger as well.

Many people are under the impression that Britain cancelled her contract for dressed poultry. This was not the case. The contract, due to the heavy volume offered, was filled sooner than had been expected. Britain took every pound she had agreed to take but found herself in the financial position of being unable, under the existing circumstances, to renew or to extend her poultry purchases. It must be remembered that poultry was and still is considered as a luxury food in Britain.

Unfortunately, the discontinuance of shipments to Britain resulted in a 5c per pound drop in the paying prices to the pro-

ducers for chicken and fowl. The high cost of feeds plus the scarcity of coarse grains, largely due to a retarded harvest, resulted in the marketing of large numbers of poorly finished birds. Indications are that this will have a detrimental effect on the sale of cockerel chicks during the 1948 hatching season.

Immediately Britain stopped her purchases of poultry, export permits to the U.S. were approved. This resulted in a large-scale movement of live and dressed poultry across the border and proved particularly beneficial to Eastern Canada and to B.C. as they are close to the large American consuming markets. The prairies profited some by the opening of these markets but not enough to prevent a heavy increase in storage holdings. Present indications are that the meat situation in the U.S. will cause such a demand for Canadian poultry that the prairie holdings should be materially reduced in time to accommodate egg holdings for fall shipment. Unfortunately, the low paying price to the producers still exists, although indications are that they will soon be back at the previous levels.

The demand for Christmas poultry, especially turkeys, continued very strong, resulting in a satisfactory price to the producers. Although B.C. and Ontario producers delivered a much larger volume of turkeys than ever before they had such a high percentage of oversized birds that the medium to smaller sized prairie birds were in demand. Alberta exported about 40% more turkeys than during the 1946 season.

Flock and Hatchery Approval Regulations

Although Alberta was not represented at the 1947 Dominion-Provincial Pullorum Conference we are kept posted as to proceedings and are co-operating in the control of Pullorum in poultry. We are continuing to use the Whole Blood method for testing. When we consider the large number of new applicants for flock approval each year it is encouraging to note the measure of control that we have over Pullorum. The increase in the number of approved flocks and birds tested is shown in Table I below:

TABLE 1.

Year	Method of Testing	No. of Flocks	No. of Birds	% Reaction
1930-31	Tube Agglutination	148	18,608	20.2
1931-32	" "	232	31,177	12.9
1932-33	" "	188	26,381	8.6
1933-34	" "	205	33,295	7.3
1934-35	" "	645	104,858	11.2
1935-36	" "	615	94,536	5.5
1936-37	" "	815	136,228	5.5
1937-38	" "	677	108,908	4.8
1938-39	" "	534	92,355	4.51
1939-40	Whole Blood	437	80,927	5.1
1940-41	" "	412	91,868	2.6
1941-42	" "	510	120,198	2.12
1942-43	" "	460	120,841	0.35
1943-44	" "	664	165,903	0.716
1944-45	" "	694	198,877	0.736
1945-46	" "	632	186,992	0.798
1946-47	" "	792	248,666	0.526

NOTE: The above reaction is on the first test. Some provinces show a lower reaction, but these are on the final tests where over 2% reaction required a second and sometimes third and fourth re-tests.

Incubator capacity and chick sales showed a substantial increase. Due to the larger volume of hatching eggs available in Alberta our shippers enjoyed a larger than usual proportion of

the profits, but there is still room for improvement as we imported approximately 200,000 dozen hatching eggs.

TABLE 2.

Year	Egg Setting Capacity	% of 1936	Chicks Hatched	% of 1936
1936	924,300	...	1,028,881	...
1937	1,036,526	112.1	1,068,056	103.8
1938	1,033,906	111.9	1,171,082	113.8
1939	1,052,759	113.9	1,394,194	135.5
1940	1,203,368	130.2	1,538,597	149.7
1941	1,269,117	137.3	1,938,052	183.4
1942	1,407,280	151.2	2,631,468	255.8
1943	1,408,070	152.3	3,607,372	350.6
1944	2,102,434	223.1	5,476,476	532.3
1945	2,208,938	238.9	4,917,366	477.9
1946	2,445,750	264.6	5,711,423	555.1
1947	3,404,773	390.0	7,452,785	724.3

The sale of R.O.P. chicks increased over 1946 by 51.13% and of R.O.P. Sired chicks by 49.98%.

Turkey Approval and Banding Policy

Hatcherymen and turkey breeders, especially the hatcherymen, are showing a keen interest in the demand for commercial poults. 1947 poults hatched were 142,996 as compared with 49,959 in 1946 or an increase of 286.2%. As many of our turkey breeders were more interested in selling breeding stock than in supplying turkey hatching eggs our hatcherymen had to import the largest percentage of their turkey egg requirements from the U.S. This is an unfortunate situation as many of these eggs came from flocks where the breeding birds are considered to be on the large size. This also applies to some of the flocks in B.C. from which hatching eggs and poults were imported.

While advocating the necessity of improving the market type of our Alberta turkey flocks we have been consistently advising our producers and hatcherymen that the trend was towards too large a percentage of large birds and that this would result in a price cut on birds over certain weights. The price cut developed this year when birds over 20 pounds, dressed weight, were cut 5c per pound. The weight range and cut apparently varied in different parts of Canada. About half-way through the buying season competition in Northern Alberta removed the price cut, but we can be assured that if we continue to produce in Canada the excessive volume of large turkeys that we will soon find ourselves in the same price situation on large birds that exists in the U.S.

Toronto Royal Winter Fair

The poultry show at the Toronto Royal this year was the largest ever staged and competition was extremely keen. Alberta poultry and turkey exhibitors sent their usual high standard exhibit and repeated their past performances in being well up in the prize money. The turkey breeders made an exceptionally fine showing, sending 45 birds and having 40 of these in the money, mostly in the top brackets. Unfortunately, our exhibits of poultry were not quite as numerous as in the past, but what did go were of fine quality and brought back a good share of the awards. Water fowl made a good showing as well. Unfortunately, the pigeon fanciers and rabbit breeders did not show any interest.

Alberta Prize Winning Exhibitors

Standard Bronze Turkeys

Old Male	
First	V. R. Hallman, Brooks
Yearling Male	
First	Mrs. Albert Tetz, Lacombe
Third	A. S. Morrison, Vermilion
Fourth	Mrs. Albert Tetz, Lacombe
Yearling Female	
First	V. R. Hallman, Brooks
Second	Mrs. Albert Tetz, Lacombe
Eighth	Mrs. Albert Tetz, Lacombe
Young Male	
First	A. S. Morrison, Vermilion
Second	Mrs. Albert Tetz, Lacombe
Fourth	Mrs. Albert Tetz, Lacombe
Young Female	
Second	Mrs. Albert Tetz, Lacombe
Third	A. S. Morrison, Vermilion
Fourth	A. S. Morrison, Vermilion
Eighth	Mrs. Albert Tetz, Lacombe

Broad Breasted Bronze Turkeys

Yearling Male	
First	V. R. Hallman, Brooks Champion Turkey
Yearling Female	
Fifth	Mrs. E. W. Tester, Innisfail
Young Male	
Third	V. R. Hallman, Brooks
Fourth	V. R. Hallman, Brooks
Fifth	Russell Poultry Farm, S. Edmonton
Twentieth	Russell Poultry Farm, S. Edmonton
Young Female	
Third	V. R. Hallman, Brooks
Fourth	V. R. Hallman, Brooks
Sixth	V. R. Hallman, Brooks
Seventh	V. R. Hallman, Brooks
Ninth	Mrs. Hugh Bennett, Box 465, Calgary
Eleventh	Mrs. Hugh Bennett, Box 465, Calgary

Bourbon Red Turkeys

Yearling Male	
Second	Mrs. Arthur Lathe, Brightview
Third	Carl Soderstrom, Armena
Yearling Female	
Second	Mrs. Arthur Lathe, Brightview
Fourth	Mrs. Arthur Lathe, Brightview
Fifth	Carl Soderstrom, Armena
Young Male	
First	Carl Soderstrom, Armena
Third	Mrs. F. Williams, R.R. 2, S. Edmonton
Young Female	
First	Carl Soderstrom, Armena
Second	Carl Soderstrom, Armena
Seventh	Mrs. F. Williams, R.R. 2, S. Edmonton
Eighth	Mrs. F. Williams, R.R. 2, S. Edmonton

White Holland Turkeys

Yearling Male	
First	Mrs. Vera Gossett, Stony Plain
Yearling Female	
Third	Mrs. Vera Gossett, Stony Plain
Fourth	Mrs. Vera Gossett, Stony Plain

Geese

Second (African Male)	W. J. Pickard, Wetaskiwin
Fifth (Chinese Male)	W. J. Pickard, Wetaskiwin
Seventh (African Male)	W. J. Pickard, Wetaskiwin

Ducks

Second (Muscovy Male)	W. J. Pickard, Wetaskiwin
Fourth (Muscovy Female)	W. J. Pickard, Wetaskiwin

Rhode Island Red Chickens

Second (R. C. Pullet)	Robert Adams, Edmonton
Third (R. C. Pullet)	Robert Adams, Edmonton

S. C. White Leghorn Chickens

First (Hen)	Gilbert Young, DeWinton
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R. C. White Leghorn Chickens

First (Trio)	Gilbert Young, DeWinton
Second (Cock)	Gilbert Young, DeWinton
Second (Cockerel)	Gilbert Young, DeWinton
Fourth (Hen)	Gilbert Young, DeWinton
Second (Pullet)	Gilbert Young, DeWinton

Provincial Poultry Plant

Previous annual reports have stressed the high standard of breeding and demonstration work being carried on at the Poultry Plant. Last year tables were given showing Record of Production, Progeny Test results and outstanding individual family records. The 1946-47 R.O.P. entry continued the good work and too much emphasis cannot be placed on the value of this breeding work in the improvement of Alberta poultry stock.

Increased accommodation for confinement rearing of turkeys was made available and very interesting and instructive data obtained. It was hoped that a bulletin on this subject would be ready for the 1948 poult season, but the need for more conclusive data will hold up publication for a while. This work will be continued during 1948.

With the trend towards the production of poults by the commercial hatcheries, the breeding work that we have been doing with the Bronze turkeys is of added importance. The development of strains and families that will give us early maturity, high egg production, lack of broodiness, high hatchability and livability is just as important with turkeys as with chickens. Combined with this is the work we have been doing in developing improved meat type turkeys of the medium weights that are in popular demand and are selling at premium prices. Our work should prove to be a sound basis for some of our more progressive turkey breeders under the proposed R.O.P. for turkeys.

The following are the numbers of S.C. White Leghorns carried at the Poultry Plant from January 1, 1947 to December 31, 1947:

Average number of Hens (Breeders)	500
Average number of Pullets	758
Total.....	<u>1,258</u>

Of the 758 pullets carried, 633 were entered under the Dominion R.O.P. Policy with the following results:

R.O.P. Entry—

Birds Entered	633
Birds Certified	469
Average Production	215 eggs
Average Egg Weight	24.6 ozs.
Average Body Weight	4.2 lbs.
Days to Maturity	178
Dead and Culls	85—15%

Progeny Test—

Males Entered	8
Males Passed	6
Females Entered	66 (families)
Females Passed	39

As stated in previous reports, the value of the work being carried on at the Poultry Plant cannot be estimated in dollars and cents. Pullets were supplied to the Schools of Agriculture,

and 4,669 pedigreed R.O.P. wing banded cockerel chicks and 495 mature R.O.P. banded males were supplied to Alberta approved flock owners for flock improvement purposes.

The University of Alberta stocked its new poultry plant wholly from our Poultry Plant.

We carried 75 Bronze turkeys for breeding purposes and hatched 875 poults. Mature banded breeding stock was sold for flock improvement purposes. We also custom hatched 513 poults for the University Poultry Department.

Feed Situation

The shortage of proteins, such as meat scrap, fish meal and vegetable oil meals, to supplement our home grown grains was acute throughout the year. The record production of baby chicks and turkey poults, plus the high standard of feeding of the breeding and laying flocks, added to the difficulties being experienced by the commercial feed manufacturers in trying to make the limited supplies available meet the heavy demand.

The following is the estimated valuation and sources of revenue for the poultry industry of Alberta for 1947.

TABLE III.

Poultry Population and Value	Number	Price	
Hens and Chickens	10,250,000	\$.80	\$ 8,200,000
Turkeys	675,500	2.50	1,691,250
Geese	94,400	1.50	141,600
Ducks	90,000	.80	72,000
TOTAL	11,110,900		\$10,104,850
Production			
Commercial Eggs (doz.)	42,000,000	.32	13,440,000
Hatching Eggs (doz.)	740,000	.47	347,800
Turkey Eggs (doz.)	24,000	4.80	115,200
Poultry Meat (lbs.)	40,000,000	.22	8,800,000
Baby Chicks	7,452,785	.15	1,117,918
Turkey Poults	142,966	.80	114,372
TOTAL			\$23,935,290
Exports			
Commercial Eggs (doz.)	15,000,000	.31	4,650,000
Poultry Meat (lbs.)	10,000,000	.28	2,800,000
Baby Chicks	160,000	.14	22,400
TOTAL			\$7,472,400
Imports			
Hatching Eggs (doz.)	200,000	.45	90,000
Baby Chicks	1,900,000	.14	266,000
			\$356,000

REPORT OF AGRICULTURAL EXTENSION SERVICE

Director, Extension Service	- - -	R. M. Putnam
Supervisor of District Agriculturists		F. H. Newcombe
Supervisor, Home Economics Service		Mrs. V. G. Macdonald
Supervisor, Girls' Clubs	- - - -	Miss M. K. Fraser
Nutrition Specialist	- - - - -	Miss B. J. Lewis
Agricultural Engineer	- - - - -	E. B. Martin
Extension Editor	- - - - -	E. B. Swindlehurst
Supervisor, Agricultural Information		R. E. English

GENERAL

The transition from war to peace became more apparent during the year 1947 and presented the Extension Service with a number of important problems. Removal of price ceilings on coarse grains and meats and the promise of higher returns for grain crops, notably wheat, created problems of first magnitude insofar as the development of a long time balanced farming programme was concerned. During the last quarter of the year there was a noticeable attitude of frustration and indecision among farmers as they awaited the outcome of the changes. Extension workers were also in a quandry because they were unable to give farmers sound advice until the new relationships became established.

One of the main events of the year for the staff of the Department engaged in extension work was an Extension Short Course which was held at the School of Agriculture at Vermilion during the week of May 12th. Through the courtesy of Mr. M. L. Wilson, Director of Extension, and Miss Gladys Gallup, Chief, Division of Field Studies and Training, United States Department of Agriculture, the services of Cannon C. Hearne, Educationist, were made available for the week. Mr. Hearne made a valuable contribution to the development of extension work in the Province, which it is hoped will result in better service being rendered.

Incidentally, the Extension Short Course was the first of its kind ever held in Canada. It was conducted as part of the policy of the Department to give workers an opportunity to improve their professional equipment. In addition to the short course, F. H. Newcombe, Supervisor of District Agriculturists, attended an Extension Short Course in Fort Collins, Colorado, and visited a number of stations and offices in the United States, obtaining information to apply in extension work in this Province. It is highly important that extension workers be as well trained in extension as possible. A comprehensive knowledge of soils, crops, live stock, farm machinery, etc., does not necessarily make a good extension worker. The ability to "put over" information and to get people to apply it on their farms and in their homes is equally important. Since very little information about extension is available in Canada yet, it is necessary to obtain the training from United States sources.

There is a need for greater clarification of the objectives of extension work and for the development of long time pro-

grammes. It is becoming more and more evident that the doing of jobs which arise from day to day is not the main function of extension workers. A more fundamental approach which would assist each farmer to work out a long time programme for his particular farm would in the end offer the most effective total service. Consideration is being given to ways and means of effecting this type of effort.

The main staff change during the year was the appointment of E. Bruce Martin, B.S.A., M.Sc., as Extension Agricultural Engineer. Mr. Martin is a graduate of the University of Saskatchewan and had about seven years' experience with the Experimental Farms Service prior to joining the staff. The District Agriculturist staff was increased by one, and the District Home Economist staff by two in 1947. During the year four District Agriculturists and two District Home Economists resigned. Replacements were found for the District Agriculturists, but for only one of the Home Economists. Maintaining a staff is a serious problem. It is complicated by the fact that there is an over-all shortage of trained workers, and by the opportunities for employment in the commercial field at more attractive salaries. The District Agriculturist staff is particularly vulnerable because many of the men are comparatively young and have not built up large superannuation funds, which in the case of men with longer service is a consideration not to be overlooked if other offers are received. It is hoped, however, that within a year or two more agricultural graduates will be available.

It would appear that the time is near when consideration must be given to the future expansion of the District Agriculturist Service. During the last 10 years the number of District Agriculturists has more than doubled. Unless the population of the province increases suddenly it would appear that the number of additional District Agriculturist offices required might be limited. It has been suggested that each District Agriculturist office might effectively handle about 2,500 farms, with the possibility of assistants being provided for part of the year in some cases.

Statistics.

No alteration occurred during 1947 in the work of compiling agricultural statistics. This Branch does not collect statistics, as this is done by the Dominion Bureau of Statistics, Ottawa. However, the data so collected is submitted to the Extension Service for comment and approval before its release, and upon publication becomes available for preparation of special tables and releases for use in the Province.

A more comprehensive statistical service is needed. This has become more apparent during the last two years when various groups of people were making charges and counter-charges regarding production costs and other matters. Without an adequate statistical service no governmental agency is in a position to supply the facts.

Publications.

The need for publications as a means of extending knowledge appears to be growing, and the demand for information in

printed form remains at a high level. This Department adopted the policy a number of years ago of distributing bulletins on request, rather than supplying them to a mailing list. It is estimated that 213,000 bulletins, leaflets and plans were distributed in 1947.

The following publications were printed or reprinted during the year:

- Bulletin 1—Turkey Raising in Alberta (revised).
- Circular 5—The Use of Fertilizers in Alberta (revised).
- Leaflet 56—Brooding and Rearing of Chicks and Poults (revised).
- Bulletin 57—The Salad Bowl (revised).
- Bulletin 58—Wintering Bees in Alberta (revised).
- Circular 63—The Selection and Seeding of Grasses and Legumes (revised).
- Bulletin 66—Feeding and Management of the Laying and Breeding Flocks (revised).
- Bulletin 72—Preserve by Freezing (revised).
- Bulletin 75—Vegetables Make the Home Plate (reprint).
- Bulletin 77—Care of Package Bees (new).
- Circular 78—Production of Field Peas in Alberta (new).
- Circular 79—Production of Grass and Legume Seed Crops in Alberta (new).
- Leaflet 80—Homemade Electric Pig Brooder (new).
- Leaflet 81—Couch Grass (new).
- Leaflet 82—Make Your Soap at Home (new).
- Control of Wild Mustard (revised).
- Special Leaflets—Alberta Field Crop Varieties (revised); Simple Water and Disposal Systems (reprint); Save and Use Fats (reprint); Sour Milk and Cream Recipes (reprint).
- Joint Publications—One-Way Disc, Maintenance and Operation (new).
- Plans—Open Range Poultry House (reprint); Single and Double Deck Poultry House (reprint); Poultry Brooder House (reprint); Ice Well (reprint); Shanty Roof Colony House (reprint).
- Periodical publications such as "Agricultural Notes", Agricultural Conditions Report" and the Alberta Farm and Home Junior Club Bulletin were issued.

Agricultural Fairs.

Fairs were held at the following points in 1947.

Class "A"—Calgary, Edmonton.

Class "B"—Camrose, Lethbridge, Lloydminster, Red Deer, Vegreville, Vermilion.

Class "C"—Benalto, Didsbury, Falher, Lousana, Olds, Priddis, St. Paul, Westlock, Wildwood, Willingdon.

The number of classified fairs held increased from 17 in 1946 to 18 in 1947 through the reorganization of fairs at Camrose and Lethbridge.

In addition to the classified fairs several agricultural societies held local fairs or shows. Among these were Goose Creek and Lamont.

Interest in fairs continued to grow during 1947. Besides the classified fairs listed above, a number of local fairs or shows were held by various organizations, including agricultural societies. The year 1947 was marked by the reorganization of several dormant agricultural societies and by the formation of new societies or associations for the conducting of a fair. Among

the associations which resumed activities or were reorganized were:

Camrose Agricultural Society.
Goose Creek Agricultural Society.
Lamont Agricultural Society.
Lethbridge and District Exhibition and Rodeo.
Rocky Mountain House Agricultural Society.

The Medicine Hat Exhibition and Stampede Association applied for and received a charter to conduct a Class "C" Fair in 1948. A new agricultural society was formed at Drumheller to carry on a number of agricultural enterprises.

The fairs which operated in 1947 enjoyed a good year. Attendance at fairs was high and the number of entries was somewhat larger than that of the previous year.

Farm Labour.

Joint Dominion-Provincial action to meet farm labour problems was continued in 1947 under the Dominion-Provincial Farm Labour Agreement. While most of the activities conducted under the agreement were similar to those of 1946, the terms of the agreement were modified to provide for the diminishing amount of time district agriculturists spent on farm labour.

The farm labour situation was generally less acute in 1947 than the previous year. However, some areas were unable to secure sufficient adequate help and farmers complained that they could not meet the high wages offered in alternative employment. Wages were, therefore, on the average higher than previous years.

A brief description of the most important activities carried on under the agreement follows below.

1. *Polish Veterans*—Alberta received about 780 Polish veterans in two groups. The first group of 500 arrived in the Province about December 1st, 1946, and the second group of 280 reached Alberta about June 1st, 1947.

The first group were contracted to farmer employers upon their arrival, and the second group were placed in sugar beet work in the Lethbridge district for the season, after which they took general farm work either in the Lethbridge area or elsewhere in the province. The Polish veterans filled a need for farm workers. On the whole, they have given satisfactory service, but a few of the men, because of lack of experience and for other reasons, have been problems. As they agreed to remain in agriculture for a two-year period, little can be done to fit these men into other employment until the end of that time.

2. *Western Farm Workers*—The Dominion-Provincial Farm Labour Service assisted in recruiting 367 men for harvest work in Ontario. The men left Alberta late in June and returned for harvest about the end of August.

3. *B.C. Fruit Pickers*—The movement of fruit pickers from Alberta to British Columbia was continued in 1947. Transportation was issued to 442 women and girls. The Dominion-Provincial Farm Labour Service assisted the National Employment Service in recruiting workers for this project.

4. *Eastern Harvesters*—The number of Eastern Harvesters brought into the Province from the East to help with the harvest was greatly reduced this year owing to a short crop in many areas, more local labour, and greater use of combines. The total number who came into the Province was 800. Of this number 460 came direct from the East, while 340 were reforwarded from Manitoba and Saskatchewan when harvesting was completed in these provinces.

As a matter of record, the Dominion Department of Labour discontinued the practice of paying one-way transportation costs on movements of agricultural workers from one province to another, and instituted instead a policy which provided that the receiving province and the Dominion would share on a fifty-fifty basis the cost of bringing workers from one part of the Dominion to another. This policy also provided for a larger payment by the workers.

5. *Movement of Harvesting Equipment*—There were 160 permits issued to residents of Alberta to allow them to take harvesting units into the United States. In addition, ten permits were issued to residents of the Peace River Block of British Columbia.

The United States harvesting equipment project was one of considerable importance during the spring months. 162 applications were submitted for entry to the United States by May 10th. On the assumption that not more than the number of combines granted entry in 1946 (40) would be required in 1947, the task of establishing priorities was undertaken. However, before the selection had proceeded very far, more orders were received and everyone who had applied was given an opportunity to secure a permit.

No United States equipment came into Alberta, as far as is known.

Assistance in moving harvesting equipment within the Province was discontinued this year.

6. Under the agreement, the Dominion - Provincial Farm Labour Service continued to assist the National Employment Service to fill farm jobs and to otherwise help farmers meet their labour needs. A total of 2,200 placements, including 16 domestics, were reported by District Agriculturist offices.

The thanks and appreciation of the Extension Service is extended to all who have in any way assisted with the work of this Branch during the year. Special mention is made of the University of Alberta, and the various Services of the Dominion Department of Agriculture, which rendered more than ordinary assistance on many occasions.

The following pages of this report have been prepared by the officials of this Branch responsible for certain phases of the work, and their reports will deal with the details of these activities.

DISTRICT AGRICULTURIST SERVICE

The duties and activities of the District Agriculturist become more complex and varied as new problems of production and economics present themselves. This service, like Alberta agriculture, has had its pioneering stage and there is evidence

to indicate that in common with agricultural practices it is looking forward to new fields, new channels of endeavour, new forms of service to the community.

The past 25 years has not only seen expansion in numbers of personnel employed, but also a great broadening in viewpoint. During these years there have been many times when service—as distinct from extension teaching—has so laden the time of the District Agriculturist that he has almost discouraged of performing his true function. His faithful performance of this service has contributed in no small measure to the prestige he enjoys to-day. With that prestige established he looks forward to a greater utilization of his time in the organization of his district toward a solution of basic problems—these problems which of necessity accentuate themselves with the passing years.

And so, the future will undoubtedly see the District Agriculturist more closely concerned with the principles of soil conservation and farm management in all its phases, and less on the details of husbandry. In this development, the whole farm family will become his unit of endeavour and each phase of the business will receive the attention it warrants.

This is the new outlook of the District Agriculturist to-day—a vision that becomes clearer as a result of experience and of the advantage taken by staff members of opportunities for professional improvement, both in Canada and the United States.

No expansion has occurred this year in the number of offices and this remains at 33—total field personnel 35. Indeed, some difficulty has been experienced in keeping existing offices staffed. Changes in personnel and stations have been made as shown below:

H. A. Rigney resigned to resume farming and was succeeded as District Agriculturist at Ponoka by W. C. Gordon, formerly of the staff at Olds School of Agriculture.

G. G. Golberg also resigned to take up farming, and W. A. Moisey was transferred from Ryley to Camrose to take his place.

N. A. Chomik, after a season at Vermilion School of Agriculture as instructor in Field Husbandry, was appointed to the Ryley office.

Peter Jamieson of the Claresholm office resumed studies at the University of Alberta, and H. D. Smith was appointed to succeed him.

L. Gareau also returned to the University for further study, and Paul Gibeau was transferred from St. Paul to Falher.

Marcel Chevette succeeded Mr. Gibeau at St. Paul.

W. R. Hanson resigned to accept employment in the United States, and D. L. Steed was appointed to the Cardston office.

D. C. Purnell resigned, and J. R. Gylander of headquarters staff assumed his duties as assistant at Lethbridge.

Thos. Kilduff was released from Thorsby for temporary duty as lecturer in Field Husbandry at Vermilion School of Agriculture.

A. T. Kemp, formerly lecturer in Horticulture at Olds School of Agriculture, was appointed as Assistant District Agriculturist at Olds.

FARM MANAGEMENT

Farm Organization.

Earlier in this report the general trend of District Agriculturist work is outlined. An indication of this is seen in the requests from farmers for assistance in planning their programmes. During the past year District Agriculturists have been responsible for the reorganization of 97 farms, in which all phases of the business have been included. An additional 111 farms have been studied and programmes prepared, including some phases. In addition also, 89 farmers have received programmes for cropping and tillage only, while 150 have been given definite personal and detailed suggestions on a farm management basis with respect to one or more phases of the farm business. Thus, 447 farmers have been assisted in their programmes with information and definite plans relating to Farm Management.

One district reports plans under way for a co-operative check for pasture carrying capacity. Another advises two ranches have been surveyed and advice given on range management, while still another held seven meetings for discussion of farm management principles.

Farm Cost Accounting.

Inseparable from the economics of successful farming is a set of records which reflect the financial condition of the enterprise. Notwithstanding the reluctance of farmers to keep books, the men report:

"Encouragement to 12 farmers resulting in adoption of accounting."

"Instruction given to 37 farmers with respect to accounts for one or more departments of the farm."

"Assistance given in dairy cost surveys. Twenty-one will definitely commence accounts early in 1948."

SOIL CONSERVATION

Projects.

Re-grassing of abandoned land in the Special Areas has been carried on energetically for some years. The District Agriculturists concerned have been active in harvesting and distribution of seed and supervision of seeding. During the year 40,000 lbs. of crested wheat grass and brome have been seeded by about 247 farmers.

Distribution of other forage seeds is, of course, a conservation measure. Emphasis is placed on use of these crops in a sequence plan. Distribution will be discussed under Crops.

Five districts organized specific conservation projects known as "Save the Soil" competitions. Entries totalled 129. Prizes were awarded on the basis of conservation methods employed by the farmers. Interest was keen and there is evidence that this project may develop into Farm Management in the future.

Five districts have embarked on a forest conservation programme. Press, radio, local organizations and personal contact will be used in an endeavour to conserve natural forests and promote re-forestation.

Demonstrations.

Local organizations, implement dealers and interested individuals have been enlisted in sponsoring demonstrations which District Agriculturists have conducted as follows:

Number Demonstrations	Subjects	Attendance
24	Tillage practices, implements, speed, ridging, stripping, etc.	721
7	Refilling water courses.	90
5	Seeding water courses to grass.	130
36		941

In addition, 25 plots have been laid down to demonstrate crop sequence, contouring, grass seeding, and fertilizers for soil rehabilitation and the control of wind and water erosion. It is estimated that these plots have been seen by 1,200 farmers.

Public Meetings.

Conservation practices have been discussed at 268 farmers' meetings, with an aggregate attendance of 10,790.

Other activities include: Preparation of lantern slides to illustrate lectures, supervision of farms with acute erosion problems, 75 press releases, 5 radio addresses, 21 window displays, and many individual contacts.

WEED CONTROL

Seed Cleaners.

Under the Departmental policy of licensing public seed cleaning machines District Agriculturists have made 99 inspection visits.

Demonstrations.

To demonstrate tillage practices, cropping programmes, use of fertilizers and chemicals in weed control, 66 method and result demonstrations were conducted and these were attended by 2,872 farmers. In addition, 120 demonstration plots were laid down with similar objectives.

Public Meetings.

There were 3,645 farmers who attended 134 meetings, which were arranged or addressed by the District Agriculturist.

General.

Weed control features were included in the "Save the Soil" competitions referred to above.

Encouragement and direction have been given in the purchase and use of weed spray machinery. Exhibits prepared for eight public gatherings attracted 1,400 visitors.

CROP IMPROVEMENT—CEREALS

Variety Demonstrations.

63 plots set out to demonstrate suitability of cereal varieties to the districts.

Seed Distribution.

For the most part, cereal seed distribution is arranged by elevator agents. District Agriculturists, however, were directly concerned with the distribution of 25,130 bushels of registered and certified wheat, oats, barley and flax. In addition, they were responsible for the exchange of 174,735 bushels of cereal seed of commercial grades.

CROP IMPROVEMENT—FORAGE

Seed Distribution.

Notwithstanding very high prices for forage seed, the District Agriculturists were responsible through local agents for the distribution of a total of 630,127 lbs. of seed. Of this, 399,124 lbs. were legumes and 231,003 lbs. were grasses. In addition to these, they assisted in the exchange of about 10% of above total in locally produced seed.

Indicating the trend, one District Agriculturist in a grey soil area reports that the proportion of grasses to the total has declined from 41% in 1942 to 9.6% in 1947. For this increased seeding of legumes the District Agriculturist is largely responsible. From the same district 60 carloads of forage seed were shipped out in the fall of 1947; another reports 800,000 lbs. of alfalfa was produced last season.

Demonstration Plots.

For variety and other demonstrations, 122 plots were laid down.

General.

27 fields were inspected for registration. Three District Agriculturists were responsible for the distribution of appreciable quantities of certified seed potatoes.

PLANT PESTS AND DISEASES

General.

In the absence of serious epidemics, the work of the District Agriculturists in this field was of a casual nature. Eleven shelterbelts were sprayed for Spruce Sawfly. Control of smut, pocket gophers, sawfly and bacterial ringrot was encouraged by press articles, personal contact and at public meetings. Two demonstrations with respect to Sweet Clover Weevil were attended by 160 farmers.

LIVE STOCK IMPROVEMENT

Horses.

Assistance was given in organizing and conducting three sales. Ten stallions and 18 mares were located for enquiring farmers.

Cattle.

Under the Cattle Improvement Policy the District Agriculturists were instrumental in placing bulls as follows:

Beef Breeds—740

Dairy Breeds—27

In addition to the above, 482 bulls were placed by private purchase and assistance was given to 62 farmers in selecting 173 head of breeding females. 38 bulls were placed under Dominion Government loan. One District Agriculturist reports the placing of 158 pure-bred bulls in the last five years.

Demonstrations and Public Meetings.

64 public meetings, attended by 1,850 farmers, were addressed on cattle improvement topics.

Sheep.

District Agriculturists were instrumental in founding 12 new sheep flocks, and in addition assisted in selection and purchase of 82 rams and 591 ewes.

Swine.

341 boars and 265 sows were placed, in addition to 19 Dominion Government boars. 27 field days, demonstrations and meetings were held, with an aggregate attendance of 563.

POULTRY

General.

Eleven field days were organized, with an attendance of 291. Advice was given to 78 farmers on poultry husbandry and diseases.

ANIMAL PESTS AND DISEASES

Projects.

The warble fly campaign was carried on as usual. District Agriculturists have been responsible for the introduction of many power sprayers and the distribution of large quantities of derris powder.

Calfhood vaccination for immunity against brucellosis has been extended. District Agriculturists have organized routes for veterinarians, resulting in vaccination of 1,141 calves in 141 herds. One district reports having effected some reduction in cost by arranging with the veterinarian for an hourly charge. Economies would, of course, be contingent on the number of calves per hour.

General.

Information has been given to 121 farmers on mastitis, sheep ticks, rhinitis, blackleg, vaccination, goitre prevention, stomach worms in swine and control of barn flies.

DAIRYING

District Agriculturists assisted 32 farmers to begin or continue in cow testing work. 39 field days, demonstrations and meetings have been conducted or arranged. These were attended by 1,558 farmers. Subjects discussed included quality of milk and cream, dairy husbandry and judging.

Junior Clubs.

Details of Junior Club activities will be reported by the Supervisor of that Branch. District Agriculturists have been

responsible during the year for the supervision of 199 clubs, with a membership of 3,657. There were 34 new clubs organized during the past season.

One district reports 45 club meetings held, with aggregate attendance of 5,526, including adults.

Extra features which have been organized for clubs by the District Agriculturists include tours of members' projects, Experimental Stations, University and industrial plants, and instruction in farm safety.

17 Club Rallies were held, with an attendance of 1,423.

Farmstead Planning.

52 farmers were assisted in planning for landscaping of farmsteads. In addition, advice was given to 10 hospitals and schools for planting of their grounds. 131 farmers were assisted with applications for shelterbelts and ornamental trees. 10,000 trees have been planned for a 15-acre project in the Special Areas. 7 districts have been assisted in existing or proposed rural electrification programmes.

Agricultural Service Boards.

In their capacity as technical members on Service Boards, the District Agriculturists are in fact largely responsible for initiating and supervising Board programmes. These programmes include:

Roadsides sprayed for weeds.

15 miles of irrigation ditches sprayed for weeds.

159 miles of road-sides seeded to grass.

Reclamation and seeding of lake shores.

Supervision and cropping programmes for weed infested farms.

Farm Labour.

Polish veterans placed or re-placed	1,141
Men sent East for harvesting	367
Harvesters placed	2,157
General farm workers placed	1,014
Others	175
Total	4,454

Beekeeping.

Sixteen meetings and demonstrations were attended by 621 farmers.

SUMMARIZED STATISTICS OF DISTRICT AGRICULTURIST ACTIVITIES:

	1945	1946	1947
Number of offices	31	33	33
Number of District Agriculturists ..	32	34	35
Number of meetings held	1,444	1,392	1,608
Total attendance	79,463	81,830	80,536
Average attendance	55	59	50
Number of farm visits	18,207	17,999	18,616
Number of office interviews	36,045	38,819	38,800
Number of letters written	31,853	33,320	32,351
Number of bulletins distributed.....	91,646	110,619	83,924
Number of telephone calls	27,289	28,738	31,124

PEACE RIVER FARM WATER SUPPLY ASSISTANCE POLICY.

After three seasons of operations it is evident that the peak of demand for assistance has been passed. Inspections were

made during the past year of 189 dugouts, in comparison with 512 for 1946 and 720 for 1945—a grand total of 1,421. Some increase may be occasioned in 1948 by the settlement of ex-servicemen in the area concerned.

HOME ECONOMICS SERVICE

This has been a year of increasing costs of living for both rural and urban families. While supplies of some goods have improved, we still have shortages due to increased demand and shipments overseas. Prices of food, clothing and household furnishings have continued to rise, while the real income for the average farm family has remained comparatively the same as last year. This Branch has encouraged, particularly through its Homemakers' Clinics, the continued practice of thrift. Obtaining longer periods of service from clothing, furnishings and equipment, and using the abilities and skills of family members to produce food and recondition possessions must continue as a part of to-day's pattern in most homes. For those who cannot further postpone necessary purchases, and especially those who are just getting established in business or farming, in a new home and with a growing family, the problem of deep inroads being made into savings which should normally be accrued is a serious one. It is a time for careful financial management, and for sound and widespread education of homemakers who are credited with spending eighty-five of every hundred dollars earned. For this reason, emphasis has been given in the programme of this Branch to information which may guide homemakers in their buying of supplies and new equipment and in the use and care of these.

The existing shortage of houses and the growing realization among farm families that it is no longer necessary to retire to town to enjoy modern comforts and conveniences has increased the demand for information regarding problems of rural housing. It is expected that much valuable information will be made available by next summer through the "Prairie Farm House Planning and Remodelling Research Committee". This Branch has assisted the Committee by expressing the homemakers' views in the development of suitable floor plans for rural homes. There is need of a Housing Specialist with some training in structural architecture. A great many old farm homes are in urgent need of remodelling and would be improved if information and advice were more readily available. The District Home Economists must deal with requests for information on adequate storage space, proper working surface heights, finishes for floors, walls and woodwork, arrangement of rooms, windows, doors and equipment, use of electricity, water and heating systems, interior decorating, and other phases of housing, all of which can make living on the farm more easy and enjoyable for the whole family.

Since there are an increasing number of families in the early stages of the family cycle, there has been an increasing demand for assistance with home sewing. To meet this need, in addition to sewing clinics, two one-week short courses in sewing were held at the Olds School of Agriculture. These proved so popular that

we were unable to accept many applications due to the limited staff.

The District Home Economists.

This year there have been eight permanent and two temporary District Home Economist offices. The location and personnel follow: Lethbridge, Miss LaPrile Low; Calgary, Miss Norma Hogg; Red Deer, Miss Beatrice Anderson; Stettler, Miss Priscilla Mewha; Camrose, Miss Edith Armstrong (appointed May 19th); Vegreville, Miss Grace Horbay (appointed June 2nd); Westlock, Miss Ruth Whaley; Grande Prairie, Miss Cecilia Connelly (appointed June 2nd); St. Paul, Miss Lillian Cheladyn (transferred from Olds School of Agriculture May 1st, resigned November 30th); Vermilion, Miss Margaret Lang (May 1st to October 1st).

Instructresses in Home Economics at the Schools of Agriculture, Miss McIntyre, Miss Moseson and Miss Hawrelak, served as specialists during the summer months.

There is a continued shortage of trained and suitable women for staff. For this reason two undergraduate students in Home Economics were employed through the summer months to assist in girls' club and women's work. It is expected that this method of pre-training will be helpful in obtaining interested and suitable women for this work.

The District Home Economists continue to report that they cannot meet the demand for demonstrations, Homemakers' clinics and girls' clubs. Many requests must be turned down or postponed indefinitely.

As the value and scope of the District Home Economists' services have become better known and understood there is a more emphatic and increasing demand from rural homemakers for individual assistance through home visits. Home visits not only assist rural homemakers with many of their real needs and individual problems, but in addition often provide the District Home Economist with a tangible means of illustrating recommended practices and standards. Problems related to home planning or remodelling, interior decoration, placement and use of new equipment, managing on a limited income, brides and newcomers unfamiliar with rural homemaking, etc., can be satisfactorily solved only through home visits. Unfortunately, until the Home Economists have cars this service is available only to homemakers living in towns, as it is impossible, except in a very limited way, to fill the requests from homemakers living on farms.

Homemakers' Clinics continue to be increasingly popular with rural homemakers. The Home Economists and homemakers report that these clinics provide one of the best methods of working with groups. The clinics are held from one to three days at a centre, and while demonstrations are given by the Home Economist, the women also participate by working on their own materials and problems under the supervision of the Home Economist.

Short courses for homemakers were held in a number of centres during the winter months in conjunction with the agricultural short courses. With an average attendance of 75 to 100

women, these short courses provide an excellent means of acquainting women not organized in clubs with the services of this Branch.

One District Home Economist has supervised and others have assisted in the experimental varietal tests of frozen fruits and vegetables conducted at the Provincial Horticultural Station at Brooks. The results have been of particular value to the growing industry of frozen food lockers in the province and expressions of appreciation to the Department for this work were tendered at the annual convention of the Cold Storage Association.

Newspaper articles and monthly newsletters for women's organizations, prepared by the District Home Economists, are reported to receive much interest and favorable comment.

GIRLS' CLUB WORK

This year 37 radio talks were given ((11 were Junior Club programmes), as well as short notes prepared for the radio section of the Agricultural Notes.

The District Home Economists report that many rural homemakers have requested a weekly radio talk.

Girls' Club Work.

The Girls' Club programme is again providing instruction in homemaking to a large number of girls living in rural areas of Alberta. The home economics projects are designed to teach the girls up-to-date methods; to improve standards and to develop desirable ideals of homemaking. The girls are also encouraged to take an active interest in their communities and encouraged in leadership and co-operation.

In 1947, projects were successfully completed by 90 clubs, with an average membership of 14. Of these, 30 carried the "Gardening" project sponsored jointly by the Alberta Wheat Pool and the Department of Agriculture.

Projects.

This year projects were offered in Clothing, Foods, Home Decoration, Etiquette and Gardening. Clothing and Gardening proved the most popular. The Gardening projects have been revised during 1947 to include more information in foods. This enables members enrolled in these projects to enter the Food Judging Competition.

Each club member was supplied with a project book, and each club leader with a manual of instruction. These leaders' manuals help experienced or inexperienced leaders to carry out projects with a minimum of supervision.

Awards.

Any club that has successfully completed a project is eligible to have an efficiency winner selected. These winners are given a trip to Girls' Club Week at a School of Agriculture during the summer. This year again, two of these short courses were held—one at each of the Schools of Agriculture. Eighty-three efficiency winners attended, and 47 clubs paid the expenses to send the second-place girl as well. The expenses involved for the second girl were room and board and travelling costs.

The programme for these short courses included lectures and demonstrations on subjects relating to the projects covered, as well as sports and social activities. Highlights of the week were the display of work done by the clubs during the year and the final banquet and programme, which were completely taken charge of by the girls.

This year the Alberta Wheat Pool awarded 27 prizes for the best garden plot in each club and presented seven clubs with awards for obtaining the best standing in each Home Economist's district.

Scholarships.

At the Girls' Weeks held at the Schools of Agriculture during the summer four scholarships to the value of \$75.00 were awarded to club girls. These scholarships were donated by the Wheat Board Money's Trust Fund to the most outstanding club girl in attendance at Club Week, and apply on a winter's course at a School of Agriculture. In 1947 the scholarships were won by:

Norma Moyer, Innisfail; Mabel Rakoz, Strome; Germaine Dusseault, Vimy; Mary Drobrocki, Seba Beach.

This year the Alberta Wheat Pool offered a scholarship to the value of \$150.00 to a member of a garden club enrolling in first-year Home Economics at the University of Alberta, with the intention of becoming a District Home Economist or a teacher.

The scholarship is awarded on the following basis:

1. Standing in club work.
2. Future use to be made of the training.
3. Scholastic standing.
4. Need for the scholarship.

The selection for the scholarship is made by a committee from the University of Alberta, the Department of Agriculture and the Alberta Wheat Pool.

The 1947 winner of this scholarship was Miss Marguerite Baker, of Delburne, who is now enrolled in first-year Home Economics at the University of Alberta.

Trips.

An invitation was extended by the 4-H Club State Leader of Montana for a representative group of club members from Alberta to attend the 4-H Club Congress at Bozeman in September. This invitation was accepted and a group consisting of two girls and two boys was selected to represent the Alberta Farm and Home Clubs. The girls were selected on the basis of their age, achievement in club work, personality and ability. The Alberta girls were:

Norma Moyer, Innisfail; Marguerite Baker, Delburne.

This trip proved to be a very worthwhile undertaking, and it is hoped that these exchanges of representatives will become an annual affair. Not only are new ideas obtained in regard to club activities, but a feeling of fellowship is fostered and a better understanding is developed of our neighbors in the United States.

National Competitions.

For the second year girls' club work has been included in the competitions sponsored by the Canadian Council on Boys' and Girls' Club Work. A clothing competition was held again, and a new competition in foods was added.

Fourteen teams of girls attended a Provincial Judging Competition held at the Olds School of Agriculture in October. These teams represented 52 clothing clubs and 35 food clubs. Each team represented the clubs in a Home Economist's district. From this group, two teams were selected to represent the province at the National Competitions held in Toronto in November.

The provincial teams were:

Foods—Lorraine Schatz, Jean Gow, Bow Island.

Clothing—Norma Moyer, Innisfail;
Karen Thompson, Markerville.

In the competitions the foods team placed first and the clothing team fifth.

By bringing the teams from each district to a central point for the provincial competitions, it was possible to give a great deal of extra help and training to the girls, and the ability of the teams could be judged more closely. The interest and enthusiasm in Girls' Club Work has increased greatly since the introduction of these competitions. Not only is this true of the club members themselves, but the general public is more interested, too.

Leaders' Courses.

During 1947 three leaders' training courses were held. One was held in April for the leaders of the clubs carrying the gardening projects, and one at each of the Schools of Agriculture in July for the other club leaders.

The garden club leaders' course was outstandingly successful. 25 out of 30 leaders attended. The course was held before the actual work of the club was undertaken. In this way the leaders were able to start their work in the right way and with many of their problems solved. They developed confidence and enthusiasm which lasted during the club year. Of the 30 clubs undertaking this project, all 30 completed their work. This is the first time such a record of completion has been set in this work, and much of the credit is due to this preliminary training.

The other two courses were attended by 35 leaders. These, too, were of much benefit, but if possible would be better held in the fall before the clubs start work. The leaders all expressed their appreciation of these courses and their desire that they be continued.

Two district leaders' courses were held as well, one at Athabasca and one at Red Deer. These were for one day and were to assist the leaders with their immediate problems.

Other Activities.

Farm girls' camps were held in conjunction with the Red Deer, Vegreville, Vermilion and Camrose fairs. Instruction at these camps was provided by this Department. Since exhibition

work can help in raising standards in foods and clothing in the home, stress was placed on instruction in exhibiting and judging at fairs.

Following requests made by the girls at the club weeks and the leaders at their various courses, an Alberta Girls' Club uniform was developed. The colors selected were maroon and white, and the dress a type which the club members can make for themselves. The making of these uniforms has been made a part of the clothing project. It is felt that the development of uniforms will do much to improve the club spirit and develop the work.

Supervision of the Girls' Club Work is carried out by each Home Economist in her own district under the provincial outline. They know where the clubs would be most successful; they give close direction to leaders; and they are able to work with these young people in the district after they finish club work.

The Home Economics training offered to girls by this Girls' Club programme is designed to benefit these young people who have no such opportunities through schools or who have left school. Because of this, the most successful and useful clubs are those in outlying districts. At the present time, the District Home Economists are hampered in their efforts to serve these districts by lack of proper transportation. Not until this situation is remedied will the full value be derived from the Girls' Club programme.

The number of girls' clubs in the province increases slowly due mainly to two factors:

1. The number of clubs in each Home Economist district is, of necessity, limited. As more Home Economists are located throughout the province so more clubs will be organized.

2. Lack of proper transportation for the Home Economist limits the places in her district where clubs will be effective. As this problem is overcome, the number of clubs will increase.

In the coming year it is hoped to encourage the club members in holding rallies and displays at local fairs. In this way interest in the work and a better community spirit will be developed, which should be worthwhile for the young people of rural Alberta.

REPORT OF NUTRITION SPECIALIST

The nutrition programme for 1947 has been carried on in much the same lines as in 1946, with the expansion of the school lunch programme and nutrition study groups. While each District Home Economist has endeavored to meet the needs of her own district, these two projects were given special consideration.

The School Lunch Programme.

More attention has been given this year to the correlation of the school lunch programme with other school, home and community activities. To this end a new approach was used. The aim of the new project is to show that nutrition education can be made a part of the total school programme, and that one of the best ways to accomplish this in the rural school is to have a school lunch programme around which nutrition education evolves. This "demonstration programme" was tried out last

spring in two school divisions, Red Deer and Pembina. Ten schools were selected in each of these two divisions. The District Home Economist visited these schools, giving nutrition talks and demonstrations on packing the lunch box to children and parents, and assisting with the organization of the lunch programme. The teachers were provided with nutritional information, methods of presenting this information, and suggestions for correlating nutrition education with other school subjects.

Since this programme was not started until after the middle of the school year, and transportation problems were increased by bad spring roads, the project was completed in only two of the Red Deer schools and in nine of the Pembina schools. However, the venture was considered successful and it was decided to carry out a similar project in the next school year, 10 schools to be selected in each Home Economist's district. This project is well under way in the Peace River and St. Paul districts, and it is hoped that the New Year will see a good start in each of the districts.

Nutrition classes were conducted by the Nutrition Specialist as a part of a course in Constructive Medicine provided for rural teachers by the Edmonton Rural Health District. This consisted of a discussion of the teacher's opportunity in nutrition education; nutritional information for teaching in schools; and methods of presenting this information.

Short Course for School Dormitory Supervisors.

Assistance to school dormitories was continued this year. A five-day course for supervisors and cooks was held at the Olds School of Agriculture. Eighteen attended, 15 of whom were from high school dormitories, two from a convent school, and one from an Indian school. This course was similar to the 10-day course given last year, the main purpose being to promote good nutrition in our school dormitories and to provide assistance in meal planning, quantity food preparation, food preservation, food purchasing and food cost accounting. Ten high school dormitories were represented, four for the first time, and the expenses of one employee in each case, and of two in some cases were paid by the school divisions.

Nutrition Study Groups.

More interest in nutrition study groups is gradually being developed. In these groups women meet together to study their needs as individuals, families, and as a community, and to discuss ways of meeting these needs.

Two nutrition leaders' training courses are now being sponsored by Women's Institute Constituencies—in Wetaskiwin and Red Deer. These are held in a series of one-day meetings. At these meetings the "leaders", representatives from different groups, are provided with basic information and sources of information, illustrative material, and methods of conducting study groups. Each leader receives mimeographed lessons, which are to be used as guides only, designed to aid them in helping their groups to discuss those phases of foods and nutrition which are most helpful to them. Interest in a similar course has been expressed by the U.F.W.A., and it is hoped that other organiza-

tions, too, will consider sponsoring leaders' training programmes.

People are becoming more and more aware of the importance of good nutrition, but they are still loath to change established food practices. The high cost of food and the many complications of modern living may seem to them to provide a legitimate excuse for continuing these practices. To people in nutrition work a real challenge is thus presented.

SUMMARY OF ACTIVITIES OF WOMEN'S EXTENSION

	1943	1944	1945	1946	1947
No. of demonstrations	461	557	990	1,140	1,095
Attendance	14,454	19,317	34,338	39,900	37,125
Average attendance	31.4	34.6	34.7	35	34.7
Field days and short courses, etc.	33	57	129	83	54
Judging at fairs, conventions	9	20	23	25	19
Radio talks	10	28	21	38	37
Publications distributed	45,105	62,000	68,400	78,080	68,910
Letters requesting information	1,855	1,786	6,663	8,788	7,617
Home visits	267	621	911	1,021	998
Girls' Clubs	85	85	87	93	90
Office interviews .....	.....	.....	.....	827	922
Phone calls for information .....	.....	.....	.....	1,646	2,189

AGRICULTURAL ENGINEERING

The Agricultural Engineering division of the Extension Service is still staffed by only one man, and consequently his duties are many and varied. During the year talks were delivered at 17 agricultural meetings and short courses. The subjects discussed included rural electrification, farm buildings, tractors, farm machinery, water and sewage disposal systems. Attendance totalled 1,314, or an average of 77.7 persons per meeting. The Agricultural Engineer acted as secretary of the Alberta Agricultural Engineering Committee, and as a member of the Western Section of the National Committee on Agricultural Engineering delivered a paper on rural electrification at the Lethbridge meeting of this organization.

Seventy tillage machinery field days were held during the period from May 26th to July 19th. The field days were handled with assistance from the following instructors: B. T. Stephanson, Department of Agricultural Engineering, University of Alberta; J. K. MacKenzie, Instructor, Institute of Technology and Art, Calgary; F. F. Parkinson, School of Agriculture, Olds; S. C. Acheson, School of Agriculture, Vermilion. The tillage field days continued to prove a popular activity of this Department. Nearly 4,000 farmers attended the 70 field days, with the average attendance being 56.5. Proper hitching and adjustment of the one-way disc continues to require the most attention. Of the more commonly used farm tillage implements, the one-way disc can be the most effective or the most destructive, depending on the way it is adjusted and operated. The tillage field days are serving a valuable purpose in demonstrating to farmers these dangers and advantages.

At the majority of the field days new tillage implements were discussed, and in some cases demonstrated. This year the Graham Hoeme Plow was being widely advertised. With the odd exception, farmers could see little to merit the wide application of this or similar types of sub-surface implements. On June 11th about 250 farmers attended a plowing match at Lacombe. F. F.

Parkinson was the judge for this event and reported a very successful day. During the coming year this Department has been asked to conduct "one-way matches" which would resemble the plowing match but using a one-way disc instead of a plow. An event such as this could serve several useful purposes, and it is hoped that a few competitions can be conducted during 1948.

A series of 18 haying and harvesting machinery short courses was arranged, and 16 were successfully carried through. They were held from July 21st to August 22nd. Four of the courses were of two days' duration, and the remainder one day each. About 1,244 farmers attended the 16 short courses, for an average attendance of 77.8. Subjects discussed included binders and mowers, swathers, threshers, combines, and general harvesting methods. The acreage of Alsike and Altaswede Clover has increased steadily, accompanied by an increased demand for information and instruction on the methods of harvesting the clover seed. Thus, when the above harvesting short courses were held in clover growing areas, interest was keen and the combine discussed with special consideration. In addition to the Agricultural Engineer, instructors acting at one or more of the courses included Messrs. F. F. Parkinson, B. T. Stephanson, J. K. MacKenzie, S. C. Acheson and J. L. Reid. Much of the machinery used was arranged through the Alberta Wholesale Implement Association. Appreciation is expressed for the co-operation of the Association, and particularly for the help given by local agents.

A further study of the problem of harvesting small seeded forage crops was planned, but could not be carried out because of wet, changeable weather which prevailed until late in the fall. A few checks of combines were made, but insufficient information was obtained to warrant any report. A home-made piece of equipment for lifting and offsetting the clover swath was investigated in the Thorsby area. The farmer in question had good results with his inexpensive machine and its adoption is being followed with interest.

Messrs. F. F. Parkinson and J. K. MacKenzie attended a special short course on August 7th and 8th held at Athabasca. They gave instruction in motors, tillage, haying and harvesting machinery, water and sewage systems, and farm lighting plants. The Athabasca school was a residence course of four days' duration and was very successful. Requests have been received for further courses of this nature.

In addition to arranging and assisting with field days, the Agricultural Engineer prepared and delivered four radio talks dealing with "Selection of Farm Power", "Making Concrete on the Farm", "Insulation and Ventilation of Farm Buildings" and "Take Time to Save Time". Fifteen articles were prepared for Agricultural Notes, while an additional 11 were written for general release.

Correspondence was quite heavy, with several hundred letters being written in reply to inquiries re agricultural engineering subjects. The majority of these inquiries dealt with water systems and sewage disposal, farm electrification, farm buildings, and concrete work.

Assistance was given to the Provincial Marketing Board in the testing of several pieces of equipment which were brought to that Board for possible manufacture and sale.

Three bulletins were prepared during the year: "Home-made Electric Pig Brooder", Leaflet No. 80; "One-way Disc Maintenance and Operation", Joint Series Publication No. 6 prepared by B. T. Stephanson and E. B. Martin; and "Cement-Sawdust Concrete", special leaflet.

It had been hoped that two other bulletins would have been published during 1947. Much material was gathered on the subject of preservative treatments for farm fence posts. We have in Alberta approximately 100,000 farms averaging 400 acres. With a conservative estimate of 1,200 posts per farm, it gives a total of 120 million posts. At a low estimate of 15 cents per post, the cost of replacement would be eighteen million dollars, and the lumber involved approximately two and one-half billion board feet. Tests to date show the unquestionable value of proper preservative treatments and offer methods for carrying them out, with a resulting saving of thousands of dollars annually.

To date there is no bulletin available, at least in Western Canada, which our farmers can obtain that supplies them with plans and information about farm barns. There is a genuine need for such a publication. In co-operation with Mr. R. P. Dixon, Dairy Herd Improvement Supervisor, it was hoped that a valuable bulletin would have been prepared and printed. Unfortunately, this has not materialized due to pressure of other work.

The need for plans for farm homes was and is equally great, but in this case it is hoped that the efforts of the Prairie Rural Housing Committee will bring forth the necessary material.

During the period 1931-1941 the number of farms in Canada increased, but the value of farm buildings dropped by over a quarter of a billion dollars. This proved very forcibly that farm buildings were depreciating rapidly and not being replaced. Since 1941 considerable building has taken place on Alberta farms. There is, however, scarcely a farm in the province whose owner does not contemplate at least one replacement or addition in the near future. To date, much of the construction has been done without adequate guidance or planning. Costly mistakes have been made. 1941 statistics show the value of farm buildings in Alberta as \$117,844,000.00. This represents a large investment and one which with proper guidance can be safeguarded. There is a vital need for extension work dealing with building plans, concrete work, insulation and ventilation of buildings, building materials, etc. There are new developments in farm buildings and building construction, as well as tried and true principles which should be made common knowledge to the thousands of farmers who will be adding to their investment in buildings.

Rural electrification is rapidly taking its place on many hundreds of Alberta farms. Figures to illustrate this growth are difficult to obtain, but it is known that in 1941 there were only 500 farms receiving central station power. Today the number has increased to around 3,000 farms. With the estimated 8,000 farms having individual electric plants, there are now about

11,000 Alberta farms with electricity. In 1948, the two power companies operating in this province hope to add another 1,200 farms to the list. The benefits of farm electrification are well known. Not only does it add to the value of the farm property, but it can make for reduced labour costs, increased production and increased profits, as well as providing for the much talked of "better living conditions" for farm people.

These days when Canadian agriculture is pressing for increased production and an attractive farm living to keep the young people on the farms, it appears that electrification can play a very important role. Unfortunately, electrification in Alberta at present is a rather hazardous investment. Because farms are relatively large and widely separated, the construction of high tension electric distribution lines is expensive. Company investments per farm are sometimes as high as \$1,200.00, and usually the farmers themselves invest a minimum of \$600.00 per farm. The whole secret of success for rural electrification is full use of power by all farmers. There must be and can be uses which are productive and economical, as compared to purely luxury and gadget uses. Experience has proven that, left to himself with electric power on the doorstep, the average farmer fails to appreciate its value and makes only limited use of it. He must be educated. It is believed that this education should be provided by some agency not connected with the companies supplying the power, as action of this kind by the companies is sometimes misunderstood and is not effective. During 1945-46 an agricultural engineer from the staff of the Dominion Experimental Station at Swift Current, Saskatchewan, made a study of rural electrification among 300 farmers in the Olds district. It has been stated that the consumption of electricity in this area went up in direct proportion to the contacts made by the agricultural engineer, resulting in the users obtaining cheaper power per unit, and the power company securing greater sale of the product.

Several requests have been received for short courses or schools on rural electrification. Such schools could be very valuable in acquainting the farmers with their new found electrical servant. They would serve not only as schools of instruction for the elementary principles of electricity, wiring, motors and safety measures, but offer a wonderful opportunity for the discussion of the numerous and profitable uses of electricity on the farm. At the present time this Department lacks sufficient staff to conduct such worthwhile schools.

In conclusion, might it be emphasized that farm interest in and dependence upon agricultural engineering has increased many fold in the past 10 years. The interests of the agricultural engineer are closely associated with every form of activity in the farm business. According to the 1941 census, farmers in Alberta have over twice as much invested in buildings and machinery as they have in all of their livestock. The figures are as follows: Buildings, \$117,844,000.00; machinery and equipment, \$116,127,900.00; electrification, \$12,000,000.00, for a total of \$245,971,900.00 as against a live stock investment of \$104,065,896.00. There is no doubt that the present value of farm buildings and equipment is far in excess of the \$246,000,000.00 and will steadily increase. An average self-propelled combine now costs

\$3,000.00. This one expensive piece of equipment can be easily damaged or rendered inefficient due to a lack of proper knowledge and information of such machines.

The following is a list of activities with which the Extension Agricultural Engineer has had to deal in the past year and must face in 1948:

1. General meetings and short courses.
2. Farm machinery field days.
3. Home and farm improvement field days.
4. One-way matches.
5. Short courses for implement dealers, oil company agents, etc.
6. Rural electrification schools.
7. Agricultural engineering residence schools.
8. Radio talks.
9. News letters.
10. Daily correspondence.
11. Collecting and interrogating information for extension bulletins and preparing same.
12. Harvesting investigations.
13. Land clearing investigations.
14. Co-operation with the Provincial Marketing Board in the testing of new inventions for possible manufacture and sale.
15. Consultations relative to inventions of new pieces of farm equipment brought to this office by farmers and others.

Several of the above items individually could utilize the full time of an agricultural engineer. For one person to participate in all activities means that the efforts are spread very thin indeed. Assistance is necessary to begin to serve adequately the demands for extension work in agricultural engineering. Trained personnel is becoming available. The Province of Alberta could readily utilize two additional extension agricultural engineers, one devoting his time to farm machinery and the other to farm buildings.

RADIO AND PUBLICITY

Activities of the Agricultural Extension Service during 1947 included a steady stream of information prepared and distributed daily and weekly by radio and press.

The Alberta Farm and Home Forum was continued on Monday, Wednesday and Friday evenings of each week. This programme, broadcast from radio stations CKUA and CJCJ, is a joint effort of the Alberta Department of Agriculture and the Faculty of Agriculture, University of Alberta. The programme takes the form of talks and suggestions for farmers and rural homemakers. Each broadcast concluded with a series of short notes of general interest, prepared and presented by the Agricultural Extension Service.

During the year, 83 talks were given on this programme by members of the Department of Agriculture. Twice each month, at regular intervals, Homemakers' Chats were offered by members of the Home Economics Division. On the first Monday of each month, the Supervisors of Boys' and Girls' Activities

assumed responsibility for the Junior Club of the Air. During the month of October, with the co-operation of radio station CKUA, a limited survey was made of the audience of the Farm and Home Forum, and some very appreciative replies were received.

Every week, a series of items under the title "Department of Agriculture Notes" was forwarded to the country press of Alberta and to farm periodicals across the Dominion. This service has met with encouraging response, and the co-operation of editors in making the information available to rural people is appreciated.

Commencing September 15th, five short radio scripts each week were prepared in co-operation with members of the various branches, and arrangements made for their presentation. This material dealt with functions of the Department, seasonal hints, reports of activities, and other topics of timely interest.

Other work undertaken during the year included supervision of the crop reporting service, assistance and advice on publications, suggestions for radio topics, reports of meetings, and submission of introductory items which appeared each month with the Farm and Home Forum programme in the CKUA Broadcast Guide.

AGRICULTURAL INFORMATION

"Agricultural Information" was issued seventeen times during the year under the supervision of R. E. English. Subject matter covered in these issues was as follows:

1. Division of Farm Expenses and Receipts under Father and Son Agreements.
2. Wheat and the Development of Inter-nation Co-operation.
3. Britain's Agricultural Bill.
4. Farming Today—For Young Men and Women.
5. The Goal for Farm Policies.
6. A Problem in Public Administration.
7. Father-Son Arrangements Studied on New York Farms.
8. Weather Forecasting in Canada.
9. One Answer to Farm Tenancy.
10. Soil Conservation Districts in South Australia.
11. The Agriculture Subsidy Programme of the Dominion Government, 1939-47.
12. The Crop Share Lease.
13. On Farm Policy.
14. Canadian Agricultural Planning.
15. Alberta Beekeepers' Association, Report of the Annual Convention (First Installment).
16. Alberta Beekeepers' Association, Report of the Annual Convention (Second Installment).
17. Farm Incomes Vary Widely.

REPORT OF THE VETERINARY SERVICES BRANCH

DR. E. E. BALLANTYNE, DIRECTOR OF VETERINARY SERVICES

DR. G. S. WILTON, ACTING ANIMAL PATHOLOGIST

On December 1, 1947, all the veterinary activities undertaken by the Department of Agriculture were co-ordinated under the Director of Veterinary Services, whose duties will be:

1. Administration and supervision of the Veterinary Laboratory.
2. Supervision and conducting animal disease investigational studies.
3. Prevention and control of livestock diseases which do not come under the Animal Contagious Diseases Act of the Dominion.
4. Supervision of the health of live stock at all Provincial Government Institutions.
5. Administration of Provincial Department of Agriculture Policies, in regard to diseases of live stock.
6. Educational work relating to diseases of live stock.

During 1947, Dr. P. R. Talbot, Provincial Veterinarian for 33 years, retired, and we wish to acknowledge the valuable service he has rendered to the live stock owners in Alberta throughout the course of his many years in office.

Dr. Ross Walton, Assistant to the Provincial Veterinarian, resigned to undertake general practice in the Red Deer district.

Much of this report, therefore, covers work done by Dr. P. R. Talbot and Dr. Ross Walton.

The increased value of live stock has created a greater demand for veterinary services, and because of the scarcity of Veterinarians many communities are deprived of their services in the prevention and treatment of live stock diseases. In three or four years this scarcity in Alberta should be alleviated, to a great extent, as we have 40 students from this province attending the Ontario Veterinary College at Guelph.

The Provincial Government is continuing to give financial assistance to students attending the said College, and hope that these men will return to Alberta after graduation and establish at strategical points throughout the province. To prevent any misunderstanding with regard to assistance given students taking this course, we believe it advisable to outline the policy as given in the 1945 Report, as follows:

"To help alleviate the need for more practising Veterinarians, the Department is offering financial assistance to students who desire to attend the Ontario Veterinary College, with the hope that these men will return after graduation and establish a practice in Alberta. However, competition for these men will be keen, and as heretofore rural practise in Alberta has not been too profitable, it is necessary that these men be guaranteed an income if we wish to compete for their services with other provinces and countries.

"To obtain the assistance referred to, the student must be a resident of the province for three years prior to enrolment at the Ontario Veterinary College. The three-year resident clause does not apply to applicants who have served in the armed forces, though they must, of course, have been resident in the province prior to enlistment. Should a student fail to pass any year's examination and retake the lost term, the assistance will apply to one year only. At the successful completion of each year at the College, the student will be reimbursed by the Department to the extent of \$200.00.

In addition to the above, the following scholarships are offered:

1. When there are three or more students enrolled for the province, the Department will provide a scholarship of \$100.00 to the Alberta student who obtains the highest general standing.
2. A general proficiency scholarship of \$100.00 will be provided any student enrolled from Alberta who obtains the highest general standing for the whole class in any one year.

"To qualify for the scholarships under (1) and (2) the standing obtained by the student must be at least 75%."

In the interest of the livestock industry of Alberta, and because the number of specimens submitted to the Veterinary Laboratory has continued to increase, until the present facilities are inadequate, the Department of Agriculture has authorized the construction of a new Laboratory for this work. It is situated adjacent to the University of Alberta Farm and construction should be completed some time in 1948. When completed the Laboratory will be one of the best in Canada for disease diagnosis and investigational studies.

HORSE DISEASES

There were only eight suspected cases of Encephalomyelitis reported by Veterinarians during the year. The horses which had come in contact with these suspected cases were immediately vaccinated and no further evidence of the disease occurred.

Some inconvenience is experienced through the fact that horses shipped into the province of British Columbia require a certificate of vaccination against Encephalomyelitis. This is not an Alberta regulation, however, and is mentioned here as there appears to be confusion in the minds of shippers that this province enforces these regulations.

CATTLE DISEASES

Hemorrhagic Septicemia.

Hemorrhagic Septicemia (Shipping Fever) has not been so prevalent during 1947 as in some previous years. We still advocate the vaccination of cattle which are to be shipped to feed lots, with a reliable Hemorrhagic Septicemia Bacterin. This should be done from two weeks to a month prior to shipping. cattle which have been exposed to infection should be isolated

for ten days or two weeks before being allowed to mix with other cattle on the premises. In addition, cattle showing symptoms of the disease should be isolated until recovery takes place. There seems to be confusion in the minds of some as to the use of bacterins and serums in the prevention and treatment of Hemorrhagic Septicemia. It must be kept in mind that the bacterin should be used as a preventive, while the serum is given when an animal shows evidence of infection. In addition to having a curative action, Hemorrhagic Septicemia serum will produce a rapid immunity. Unfortunately, however, this immunity will last only a short time. Therefore if this biologic is used as a preventive, it should be followed immediately by the injection of a Hemorrhagic Septicemia bacterin, which should give an immunity over a considerable period of time.

Blackleg.

Blackleg continues to be one of the most common diseases affecting cattle, especially in certain districts in the province. The use of Blackleg Filtrate, Blackleg Bacterin and Blackleg Aggressin, of reliable manufacture, is gradually having an effect in reducing the losses from this disease. If the stock owner would remember to vaccinate his young cattle as a regular routine, instead of waiting until an outbreak of the disease occurs, losses from this cause could be reduced to a minimum.

In some districts, where Blackleg is particularly prevalent, we recommend that calves two to three months old be vaccinated, then a second dose be given when the animal is between the age of six months and a year. If this procedure is followed a lasting immunity can be expected.

In districts where losses from both Blackleg and Edema occur it is advised that a mixed bacterin, to build up an immunity against both diseases, be used.

Brucellosis (Bang's Disease)

The policy to aid aid cattle owners in vaccinating their calves against Bang's disease has been continued throughout the year. The difficulty is that owners appear to be reluctant to take advantage of the policy until the disease strikes, and when it does they expect to get immediate relief through vaccination. This, of course, cannot be accomplished, and is not the purpose of the policy.

In 1947 a total of 6,781 calves were vaccinated. The total since 1944 is 14,598.

There are two main factors which prevent the vaccination of all calves for which applications have been submitted in any one year. First, the majority of cattle owners, especially those with large ranch herds, will not round-up their calves until the snow falls. Secondly, when winter sets in the roads often become impassable and transportation is difficult. This results in a large number of calves not being vaccinated until the first of the year, although the applications have been received in the fall. We have tried to confine this work to two months in each year—May and November.

Calfhood vaccination has been extensively relied upon by many owners during the past few years, as an aid in building up a herd having resistance against the disease. This policy is favoured by some as they consider it less expensive than slaughtering the infected cattle when a high percentage of the herd are reactors.

Calves should be vaccinated with a suitable vaccine at from four to eight months of age, which will give them a valuable resistance. Strain 19, *Brucella Abortus* vaccine, is used for calfhood vaccination. It is a live culture of low virulence and experiments to date show it will not cause abortion, sterility, or spread infection through the herd. On a farm, or in a district where brucellosis is prevalent, calfhood vaccination is recommended as a sound method of preventing and controlling the disease.

Mastitis.

Mastitis is one of the most prevalent and costly diseases of dairy cows. It reduces milk flow by 20—25%, as well as reducing the value of breeding stock. Ridding the herd of Mastitis necessitates the testing of each animal to detect infection, the treatment of each individual infected quarter, the employment of good herd management and sanitation to prevent the reinfection of cured quarters, as well as the development of new infection in the herd.

This Branch, in co-operation with the Dairy Branch, is working on a Mastitis Control programme for dairy herds, which will aid in the production of milk of a better quality through the control of the disease.

SWINE DISEASES

Swine Rhinitis continues to exist in some herds, although it appears to be on the wane. No doubt the decrease in hog production has had something to do with this; also many swine raisers recognize the fact that they must carry out sanitary measures if they are going to remain in the swine business. In general, swine appeared to have been comparatively free from disease throughout the year.

SHEEP DISEASES

There has been little change in sheep diseases during the past year. Sore Mouth, Keratitis, Enterotoxemia, Lambing Paralysis and Parasites are the common diseases affecting sheep. Bulletins prepared by the Branch, and by the University of Alberta, contain valuable information on feeding, management and diseases of sheep, and can be obtained by applying for same to the Extension Branch of this Department.

EDUCATIONAL WORK

A large number of meetings, field days and short courses, have been attended to discuss live stock diseases. Emphasis is laid on the prevention of disease. Courses in disease prevention were given to students at the Provincial Schools of Agriculture.

STALLION ENROLMENT

The number of enrolments for 1947 was 180, a decrease of 30 from the 1946 total of 210. There were 17 inspected; 15 passed and three to be re-examined.

Stallion owners can no longer afford to travel their horses through a district as was the practice in years past. In fact even standing a stallion at an owner's premises, in many instances, will not pay expenses. In spite of the fact that good heavy horses bring a fair price, the farmers consider that the cost of raising a horse to saleable age, considering the time to break it in thoroughly, does not bring sufficient returns to make horse raising profitable.

It would appear from the number of horses being sent to fox farms, as well as those being processed at the different plants in Western Canada, that the horse population will soon be depleted to a danger point, and for this reason consideration should be given to encourage farmers to raise a few colts of good quality each year.

The demand for good draft horses will, in our opinion, improve, and we should be in a position to meet this when the situation arises. We believe the only satisfactory method of controlling the breeding of horses is by inspection and enrolment of stallions. Therefore our present policy will have to be continued in spite of the fact that the situation at present is not encouraging.

The light horse picture is entirely different, and the interest in thoroughbreds, saddle horses and both light and heavy hunters extends from one end of the province to the other. Active Thoroughbred Associations in both northern and southern Alberta have done a great deal to improve the light horse industry. They have been instrumental in bringing into this province, Thoroughbred sires of good quality.

Saddle clubs at both Calgary and Edmonton have also played an important part in the light horse industry, and through their membership have created a demand for horses of a desirable type. The Shows and Exhibitions at both Calgary and Edmonton, for light and heavy hunters, have been an inspiration to all interested in light horse breeding.

The following is a summary of enrolments and inspections covered by this Branch during 1947, according to breeds:—

Breed	Enrolled	Inspected	Passed	Turned down	To be re-examined
Percherons	83	3	3	0	0
Clydesdales	9	2	1	1	0
American Saddle	9	0	0	0	0
Arabian	1	0	0	0	0
Belgians	38	0	0	0	1
Canadian Shire	1	0	0	0	0
Canadian Standard	1	0	0	0	0
Hackney	1	0	0	0	0
Standard Breds	4	0	0	0	0
Suffolk	1	0	0	0	0
Thoroughbreds	32	12	11	1	2
Totals	180	17	15	2	3

VETERINARY LABORATORY

The Department of Agriculture opened the Provincial Veterinary Laboratory in 1940. During 1947, 2,926 specimens have been examined, making a total of 14,354 since offering this service to the Veterinarians and farmers of Alberta.

The main duties of the Laboratory are:—

(1) Post-mortem and bacteriological examination of specimens submitted by veterinarians, district agriculturists and farmers.

(2) Blood testing service in which cattle bloods submitted by veterinary surgeons are subjected to the agglutination test for the diagnosis of Brucellosis (Bang's Disease).

(3) Preparation of autogenous biological products, most of which are made to control distemper in fur bearing animals. Bacterins are occasionally prepared to control germ infection in other species.

(4) Providing information by correspondence, field days, meetings, and by discussion with livestock owners, district agriculturists and veterinarians who personally visit the laboratory.

(5) Investigation of animal diseases.

Diagnostic Service.

During the year 2,926 specimens have been examined. There were also 7,510 cattle blood samples submitted to the tube agglutination test for Brucellosis (Bang's Disease).

The tables following summarize the diagnostic work of the year.

SPECIMEN TABLE

Species	Live	Dead	Portions	Total
Swine	70	87	40	197
Horse .....	....	....	11	11
Cattle	2	5	45	52
Sheep	2	9	5	16
Buffalo .....	....	....	2	2
Fox	2	10	....	12
Mink	112	227	....	339
Marten .....	....	1	....	1
Rabbit	2	3	1	6
Chinchilla .....	....	16	....	16
Dog .....	....	4	2	6
Cat .....	....	4	2	6
Chicken	605	913	34	1,552
Turkey	69	229	10	308
Pheasant	1	5	....	6
Feed .....	....	....	43	43
Faecal Samples .....	....	....	6	6
Milk Samples .....	....	....	287	287
Blood Samples .....	....	....	33	33
Miscellaneous	2	2	14	18
Water Samples .....	....	....	9	9
Total	<u>869</u>	<u>1,515</u>	<u>542</u>	<u>2,926</u>

	Horse	Cattle	Sheep	Swine	Buffalo	Fox	Mink	Marten	Rabbit	Chin- chilla	Dog	Cat	Total
Abcess	1	2	1	5	1	....	5	....	....	....	....	....	15
Accidosis							24	....	....	....	....	....	24
Actinomycosis		1	....	....	....	....	....	....	....	....	....	....	1
Anemia				22	....	....	5	....	....	....	....	....	27
Arthritis				2	....	....	....	....	....	....	....	....	2
Avitaminosis				2	....	....	....	....	....	....	....	....	2
Blackleg	1	15	....	....	....	....	....	....	....	....	....	....	16
Urinary Calculi		1	....	....	....	....	6	....	....	....	....	....	7
Coccidiosis		1	....	....	....	....	2	....	....	....	....	....	3
Corynebacterium		6	....	....	....	....	....	....	....	....	....	....	6
Cystitis							3	....	....	....	....	....	3
Distemper						3	59	....	....	....	....	....	62
Enterotoxemia							1	....	....	1	....	....	2
Errors in Feeding	1	....	1	2	....	....	2	....	....	1	1	....	8
Food Poisoning		7	....	....	....	3	84	....	....	1	....	....	95
Gastritis and Enteritis			4	69	....	3	48	....	....	2	3	4	133
Infection of Newborn			1	....	....	....	....	....	....	....	....	....	1
Keratitis		2	....	....	....	....	....	....	....	....	....	....	2
Injury		1	....	....	....	....	4	....	....	1	....	1	7
Leukemia				4	....	....	....	....	....	....	....	....	4
Lungworm			1	....	....	....	....	....	....	....	....	....	1
Malignant Oedema		2	....	....	....	....	....	....	....	....	....	....	2
Mastitis		203	....	....	....	....	....	....	....	....	....	....	203
Necrotic Enteritis		1	1	10	....	....	....	....	....	....	....	....	12
Necrophorus Infection				4	....	....	....	....	....	....	....	....	4
Neoplasm							2	....	....	....	....	....	2
Nephritis				1	....	....	....	....	....	....	....	....	1
Nursing Sickness							2	....	....	....	....	....	2
Overdose Reduced Iron				1	....	....	....	....	....	....	....	....	1
Parasites External			2	....	....	....	....	....	....	....	....	....	2
Pasteurella Infection		2	1	2	....	....	....	....	....	....	....	....	5
Pneumonia		12	2	61	....	....	12	....	....	1	....	....	88
Poisoning (Chemical)		4	....	....	....	....	....	....	....	1	....	....	5
Pregnancy Disease							2	....	....	....	....	....	2
Pyemia							1	....	....	3	....	....	4
Pyelonephritis		1	....	....	....	....	....	....	....	....	....	....	1
Rhinitis				2	....	....	....	....	....	....	....	....	2
Ricketts				2	....	....	....	....	....	....	....	....	2
Roundworms		1	....	43	....	1	....	....	....	1	....	....	46
Salmonella Infection				1	....	2	27	....	....	....	....	....	30
Scours				5	....	....	....	....	....	....	....	....	5
Septicaemia		5	1	14	....	....	12	....	....	3	....	....	35
Staph. Infection		7	....	....	....	....	....	....	....	....	....	....	7
Swamp Fever	1	....	....	....	....	....	....	....	....	....	....	....	1
Swine Erysipelas				2	....	....	....	....	....	....	....	....	2
Swine Influenza				3	....	....	....	....	....	....	....	....	3
Tapeworm			2	....	....	....	....	....	....	....	....	....	2
Tuberculosis		1	....	....	2	....	....	....	....	....	....	....	3
Tumor	2	....	1	....	....	....	....	1	1	....	1	....	6
No Evidence of Disease or Putrid	6	35	4	18	....	....	21	....	....	3	....	....	87
Miscellaneous	5	8	1	3	....	2	8	....	5	3	....	1	36
Faeces		1	....	....	....	....	1	....	....	....	....	....	2
Total	17	319	28	278	3	14	331	1	6	18	8	6	1,024

POULTRY DISEASE TABLE

	Chicken	Turkey	Miscellaneous
Avian Diphtheria .....	....	....	1
Blackhead .....	....	26	....
Botulism .....	....	1	....
Bronchitis	51	....	....
Chilling and Overheating	220	58	1
Coccidiosis	233	18	2
Eggbound and Internal Laying	26	....	....
Encephalomalacia in Chicks	4	....	....
Enteritis	21	7	2
External Parasites	8	2	....
Fowl Cholera	2	....	....
Fowl Typhoid	9	1	....
Impaction	112	6	....
Internal Parasites	92	14	....
Laryngotracheitis	4	....	....
Leukemia	33	....	....
Neoplasm	5	....	....
Nutritional Disorders	32	5	....
Omphalitis	8	....	....
Perosis .....	....	11	....
Poisoning	9	....	....
Pullorum Adult	22	4	....
Pullorum Chick	66	....	....
Paralysis	14	1	....
Prolapse	15	2	....
Roup	31	5	....
Ruptured Liver	1	....	....
Sinusitis .....	....	9	....
Tuberculosis	72	7	....
Visceral Gout	18	....	....
Miscellaneous	17	5	2
No Evidence of Disease or Putrid	93	43	2
Total	1,208	220	12

Biological Products.

Autogenous bacterins have been prepared to curb different diseases of livestock. Distemper in mink has been quite prevalent in certain areas of the Province during the year. Formalized tissue vaccine prepared by the laboratory has been used against these cases with good results. Brucella abortus antigen was made for the free cattle blood testing service. We prepared salmonella pullorum antigen for the tube test but due to the rapid test being used on flocks of the Province by the Poultry Branch the tube test is only used occasionally. We also prepared positive and negative Brucella serum for distribution to veterinarians who requested it for the rapid test.

Contagious Abortion (Bang's Disease)

This disease in cattle is quite prevalent throughout the Dominion. Control lies in the vaccination of all heifer calves between the ages of four to eight months. Veterinarians have continued to use our free blood testing service to determine the degree of infection. Out of 7,510 tests made, there were 921 positive reactions and 206 doubtful.

Mastitis.

This disease is a major problem in the dairy industry. The Department of Agriculture has offered a mastitis control program to dairy producers in an endeavour to reduce the infection to a minimum. The Dairy Bacteriologist has examined the samples for this plan so that further data and results will be included in the Dairy Branch report. The Veterinary Laboratory has continued to examine milk samples submitted by veterinarians in the Province. Out of the 287 samples that have been examined,

203 of these were found to be harboring one of the causative organisms of mastitis.

Hemorrhagic Septicaemia.

Many lung specimens submitted revealed the causative organisms of hemorrhagic septicaemia.

This disease always causes losses in the cattle population, especially in the fall months in feeder cattle at the time of shipment. The fluctuating temperature of the weather at that time plays an important part in bringing on this disease. Overcrowding in transit, lack of feed, water and rest is also the cause of many cases. It is recommended that feeder cattle be vaccinated with a bacterin at least two weeks before shipping.

Blackleg.

Every year muscle specimens from cattle having succumbed from blackleg are received at the laboratory. Due to the fact that this disease is quite common and affects chiefly young cattle, it is recommended that they be vaccinated between the ages of three months and two years with a blackleg bacterin in the spring before being turned out to pasture. Calves born after the noted time should be vaccinated at three months of age.

Bovine Breeding Investigation.

The District Agriculturist at Athabasca and the Dominion District Fieldman here received many complaints from farmers during the past year in the Athabasca district regarding the unsuccessful breeding of their herds. Many cows were mated four or five times without success. We visited five farms where it was known that this difficulty existed. A few blood samples and specimens from the female genital tract were taken from each herd. The tests made on all cows for Bang's Disease were negative. The examination for genital protozoan and bacterial diseases were also negative.

Questioning the farmers revealed that they either neglected to administer minerals in the diet or failed to administer all the essential minerals in the desired quantity.

Conclusion—The breeding difficulty was due to a mineral deficiency. To overcome this condition the proper minerals must be administered in the proper manner continuously. Improvement will not be noted until this procedure has been followed carefully for a period of four to six months.

Central Eastern Alberta Investigation.

During the past summer many complaints were received from this area regarding a nervous condition that existed in cattle. In early September we visited three farms at a distance of fifty miles from one another. In each district several cattle had died ranging from one to two years. On each farm a young animal of the bovine species showing similar nervous symptoms was post-mortemed. The tissues were properly prepared and brought to the Veterinary Laboratory where they were injected into various experimental animals.

Thus far attempts to reproduce the condition in the bovine species have been unsuccessful. Should the condition re-occur next summer further investigation will be made. I might mention that a condition similar to the symptoms described was present in cattle in California a few years ago. The attempts made there to reproduce the condition in the original species were also unsuccessful.

Swine.

The number of specimens examined during the past year showed a slight increase over that of last, although there was a decrease in the swine population. The diseases found most frequently in this species are preventable by good housing and feeding and by following simple routine practises for the prevention of common ailments. Without suitable quarters for housing to include adequate ventilation, warmth and sanitation it is difficult to prevent pneumonia, pasteurella infection and other serious diseases. Lack of sanitation usually aggravates the menace of worm infestation. There are several deficiency diseases which are traceable to a lack of essential ingredients in the ration such as; iodine, iron, vitamins and proteins.

The number of rhinitis cases in the Province appear to be less with the decrease in the hog production.

Poultry.

Last year's report showed a marked increase in the poultry specimens submitted. There has again been an increase to the extent of one-third over that of 1946. It is interesting to note that the number of poultry specimens submitted the past year is almost equal to the *total* number of specimens submitted the year of 1945 and greater than any year previous. It is unlikely that disease was more prevalent but rather a case of the farmers becoming aware of services rendered. The poultry table relates the incidence of disease, with tuberculosis, coccidiosis, pullorum and nutritional disturbances being the greatest offenders. Sulphonamide preparations have given better results in preventing losses due to coccidiosis than any other preparations or methods previously used. Sulphamethazine is the drug of choice that builds up an immunity as well as checks the disease. Sulphaguanadine particularly as a preventative gives gratifying results.

Extensive rapid whole blood agglutination testing for pullorum disease in chickens and turkeys was carried out under the direction of the Poultry Commissioner. The causative agent of pullorum disease was isolated from 66 chicks submitted to the laboratory. A percentage of the putrid specimens would have yielded this organism if they had been suitable for examination. Regulations enforced by the Poultry Branch have reduced the incidence of this disease among chicks sold by approved hatcheries but complete eradication is difficult to attain.

Fur.

The number of fur bearing animals examined during the past year showed quite a marked increase over that of other years.

The incidence of distemper in mink unfortunately was greater than last year. Two outbreaks occurred in the immediate vicinity of Edmonton and two in the immediate vicinity of Calgary. Different areas in the north, however, suffered heavy losses in their mink from distemper. Distemper cases in the fox for the past year were few. Some ranchers immunize their animals against this disease each year by using a commercial vaccine. When the disease breaks out in a ranch, we have endeavoured to assist the rancher by preparing vaccine, when possible, from the diseased animals. During the year 3,358 mink were vaccinated with vaccine prepared by the Veterinary Laboratory.

About 130 specimens submitted were found to have been affected with food poisoning and other digestive disturbances. This, no doubt, is partially due to the difficulty in obtaining high quality horse meat. Due to many ranchers having improper storing facilities the poor quality minced meat soon decomposes resulting in many digestive disturbances.

We have continued to work with the Director of Agriculture Extension by assisting at meetings and field days as time permitted.

REPORT OF FUR FARMS BRANCH

J. KEITH, Fur Farm Supervisor

In August of this year, Mr. Donald R. Fraser was appointed Assistant Supervisor of Fur Farms, commencing his duties in this capacity on September 8th.

The following are the main duties of the Fur Farm Supervisor:

1. To assist fur farmers in establishing and maintaining a good line of breeding stock.
2. Inspection of fur farms as frequently as possible to see that these are conducted in a creditable manner.
3. Conducting Fur Farm Field Days at all points where there are sufficient fur farmers located for this purpose.
4. Assisting at Live Animal and Pelt Shows.
5. Checking on outbreaks of communicable diseases on fur farms.
6. Conducting and supervision of the office work.

Breeding Stock.

A considerable increase is noted in the number of mink retained as breeding stock which was not justified by the values obtained on the Pelt Market. However, this condition occurred after it was too late to effect a reduction owing to the animals being past the prime condition for pelting. The foxes retained show a reduction of approximately 25%, which was still too many for the values obtained for this article.

Production.

The crop of young foxes this season was much better than desired with the market prospects in view, and many fox farmers destroyed the less desirable types rather than feed them, with a definite loss facing them.

The increase in mink production was a fair average crop, but the Lac La Biche area suffered heavy losses among the young mink through malnutrition, followed by disease, caused through a very serious feed shortage.

Feed Supply.

The supply of feed this season was more plentiful than the previous year, excepting in the Lac La Biche district, where the fur farmers depend almost entirely on lake fish, and these were almost non-existent.

The Horse Co-operative Marketing Association Ltd. in Edmonton were not so active in processing meat for export during the season when the needs of the fur farmers were most pressing, consequently there has not been any shortage for the fur farmers served by this organization.

Many of the fur farmers in the Lac La Biche district were not in a financial position to avail themselves of the supply obtainable from this source, thus resulting in serious hardship and heavy losses.

The Department of Agriculture through the co-operation of the Department of Public Works opened a road from Lac La Biche to a number of small lakes, thus making a supply of fish available sufficient for the needs of the district for the current season.

Fur farmers in the south and centre of the province have been able to secure a plentiful supply of feed. A feed supply for the future is a source of grave concern to the industry, as the production of horses is practically discontinued. This, together with the depletion of the fish in the northern lakes, is a grave menace to the future of fur farming.

Health.

On the whole, the health of the animals throughout the province has been fairly good, but due to the use of more frozen food in both meat and fish this season, the appearance of the pelts marketed recently show a depreciation in quality as compared with former years, when a greater percentage of fresh meat and fish was used.

Disease.

There have been several outbreaks of distemper among mink at the following points: Calgary, Edmonton, Faust, Widewater, Slave Lake and Lac La Biche. Apart from Lac La Biche, where it assumed epidemic proportions, the cases at the other points were reported without delay and specimens submitted to the Veterinary Laboratory, where as much vaccine was developed as was possible and supplied to the fur farms affected. The more serious cases obtained their needs in vaccine from Fromm's Depot, through Dr. Kirk, Department of Natural Resources, Regina, who is agent for the distribution of Fromm's Products throughout the Western Canadian provinces.

Control of Disease.

A great deal remains yet to be done in this respect. There are far too many fur farmers who do not realize the danger they are exposed to through lack of ordinary precautions necessary to prevent infection, such as vaccinating all of their breeding stock prior to the mating season, which results in the females supplying immunity to their offspring up to the weaning period. Many do not report disease on their farm, and when fish or meat is delivered to their ranch the boxes are returned in a contaminated condition and delivered with a fresh supply to another ranch, thus spreading the disease. This is done in spite of the Fur Farm Regulations, which under Section 118 calls for an immediate report on all cases of disease to be sent to the department.

Field Days.

These were held at the following points: Slave Lake, October 20th; Joussard, 21st; Canyon Creek, 23rd; Plamondon, 24th; Camrose, 27th; Stettler, 28th; Red Deer, 29th; Drumheller, 30th; Medicine Hat, 31st; Macleod, November 1st; and Wabamun, 5th.

Due to the prevalence of distemper at Faust and Lac La Biche, a meeting of the Fur Breeders only was held instead of a Field Day.

The attendance was good, but a greater number of animals on exhibit is necessary as a fur farmer cannot profit from attendance unless he brings some of his animals for comparison and comment upon them by the presiding judge.

Pelt Show.

This is the tenth show of pelts produced on the fur farms in Alberta and was again staged in the City Market Building in Edmonton, which proved well suited for the occasion, being both commodious and easy of access to the public, also serving a useful purpose as an advertising medium for the sale of pelts.

The show was well patronized on the three days, viz.: 7th, 8th and 9th of January, 1947, while the entries consisted of 479 Fox Pelts and 531 Mink Pelts from all sections of the province.

Douglas MacLachlan of the Dominion Fox Grading Service judged the fox pelts, with Norman Boyd of Little Bros. Fur Sales Agency, Vancouver, judging the mink pelts.

There was a very substantial increase in the entries for both foxes and mink from the preceding seasons, which is definite evidence of increased interest in the value of a Pelt Show to the breeders in the province.

Live Animal Show.

This tenth successive show was held at the Exhibition Building, Edmonton, on November 10th to 12th, inclusive. Unfortunately, the building originally arranged for was not available and the one used was very congested with the large number of entries, viz.: 376 Foxes, 1,127 Mink, 11 Marten and 2 Fisher. The weather conditions were not all that could be desired, especially as the mink had to be judged outside due to the lack of space and poor lighting inside the building.

The show was very well supported by entries from all over the province, as well as from Manitoba and British Columbia.

The judges were Geo. Harris, of Lampson, Fraser & Huth, New York, for foxes, and Frank Gothier, of Anthon, Iowa, for the mink. Both handled their work in a very efficient manner, in spite of the unfavorable conditions they were operating under.

It is very evident that the annual live animal show is appreciated by the Fur Farmers for its educational value from the increased number of exhibitors and exhibits at each successive show.

Markets.

The Fox Breeders have experienced an extremely difficult season with an almost entire lack of interest and demand for their product from the fur trade. It was only through the Agricultural Products Co-operative Marketing Act being made available to the Fox Farmers that prevented a collapse of the fox industry.

In spite of this temporary assistance, a substantial number of Fox Farmers have pelted out entirely this fall, while others have culled hard and cut down their breeding stock.

There is now evidence of renewed interest in fox furs and substantial quantities are being used by the fur trade, but the

prices are still short of meeting the cost of production. However, as the demand increases, it is to be hoped that the price will also advance.

The mink breeders have fared differently, as the opening market of this season has shown a decided improvement in both demand and values over last season's business. This condition applies to all standard mink and also to the solid colored types of mutation mink, but the pattern type of mutation mink still lack interest from the fur trade, and these have been almost entirely pelted out this season.

Inspection of Fur Farms.

Due to the difficulty experienced in securing a suitable Assistant Supervisor in time for him to take part in this work during the current season, there was not as many farms covered as is desirable and necessary in one season.

This is a very important duty of the Supervisor and is the most appreciated by the fur farmers throughout the province, both experienced and inexperienced. The number of requests for this service and the complaints for lack of same is evidence of the value they all place in this branch of the work.

A determined effort should be made to extend this type of service for the future.

Fur Farming Literature.

A bulletin is in course of being compiled to include all phases of the Fur Farming Industry in as simple a form as possible, to meet a much felt need of the fur farmers of the province.

Fur Farm Statistics for year ending August 31st, 1947:

NUMBER OF ANIMALS DECLARED ON FUR FARMS IN ALBERTA 1946-47

Kind of Animals	Total No. of Animals	Av. Value Per Animal	Total Valuation
Fox, Silver	10,695	\$ 18.10	\$ 193,579.50
Fox, White Marked Silver	9,490	17.41	165,220.90
Fox, Platinum,	5,340	41.84	223,425.60
Fox, Pearl Platinum	613	58.02	35,566.26
Fox, Pearlatina	137	44.00	6,028.00
Fox, Glacier Blue	52	65.00	3,380.00
Fox, Arctic Blue	1,236	14.05	17,365.80
Fox, Arctic White	25	20.60	515.00
Fox, Cross	287	20.00	5,740.00
Fox, Red	69	10.00	690.00
Mink, Standard	192,483	20.42	3,930,502.86
Mink, Platinum	5,614	69.87	392,250.18
Mink, Silver Sable	1,141	32.94	37,584.54
Mink, Black Cross	4,180	19.85	82,973.00
Mink, Blue Cross	111	18.95	2,103.45
Mink, 95% White	914	47.05	43,003.70
Mink, White	89	56.37	5,016.93
Mink, Pastel	190	62.30	11,837.00
Mink, Glacier Blue	50	25.00	1,250.00
Mink, Royal Silver	34	13.15	447.10
Mink, Ring Neck	6	25.00	150.00
Mink, Martone	4	100.00	400.00
Mink, Ebony Blue	23	24.74	569.02
Mink, Half Blood Platinum	1,027	21.38	21,957.26
Chinchilla	203	79.51	16,140.53
Marten	96	69.16	6,639.36
Fitch	511	4.03	2,059.33
Nutria	24	2.50	60.00
Raccoon	19	2.25	42.75
Lynx	4	35.00	140.00
Total	284,667		\$5,206,638.07

NUMBER OF LIVE ANIMALS EXPORTED FROM ALBERTA 1946-47

Kind of Animal	Total No. of Animals	Av. Value Per Animal	Total Valuation
Fox, White Marked Silver	11	\$23.00	\$ 253.00
Fox, Pearl Platinum	1	70.00	70.00
Mink, Mink, Standard	1,174	30.00	35,220.00
Mink, Platinum	156	75.00	11,700.00
Mink, Silver Sable	26	40.00	1,040.00
Mink, Black Cross	31	25.00	775.00
Mink, Blue Cross	6	25.00	150.00
Mink, 95% White	12	50.00	600.00
Mink, White	18	60.00	1,080.00
Mink, Pastel	14	65.00	910.00
Mink, Glacier Blue	3	25.00	75.00
Mink, Half Blood Platinum	147	35.00	5,145.00
Mink, Ebony Blue	3	25.00	75.00
Chinchilla	10	100.00	1,000.00
Marten	11	70.00	770.00
Fitch	57	6.00	342.00
Total	1,680		\$59,205.00

NUMBER OF ANIMALS RETAINED FOR BREEDING STOCK IN ALBERTA

Kind of Animal	1946-1947 Total No. of Animals	Av. Value Per Animal	Total Valuation
Fox, Silver	4,147	\$23.00	\$ 95,381.00
Fox, White Marked Silver	3,586	23.00	82,478.00
Fox, Platinum	2,435	50.00	121,750.00
Fox, Pearl Platinum	306	70.00	21,420.00
Fox, Pearlatina	22	65.00	1,430.00
Fox, Glacier Blue	52	65.00	3,380.00
Fox, Arctic Blue	317	20.00	6,340.00
Fox, Arctic White	14	25.00	350.00
Fox, Cross	140	20.00	2,800.00
Fox, Red	13	10.00	130.00
Mink, Standard	71,275	30.00	2,138,250.00
Mink, Platinum	4,585	75.00	343,875.00
Mink, Silver Sable	772	40.00	30,880.00
Mink, Black Cross	2,192	25.00	54,800.00
Mink, Blue Cross	44	25.00	1,100.00
Mink, 95% White	602	50.00	30,100.00
Mink, White	52	60.00	3,120.00
Mink, Pastel	157	65.00	10,205.00
Mink, Glacier Blue	47	25.00	1,175.00
Mink, Royal Silver	3	25.00	75.00
Mink, Ring Neck	6	25.00	150.00
Mink, Martone	4	100.00	400.00
Mink, Ebony Blue	18	25.00	450.00
Mink, Half Blood Platinum	214	35.00	7,490.00
Chinchilla	129	100.00	12,900.00
Marten	81	70.00	5,670.00
Fitch	52	6.00	312.00
Nutria	5	2.50	12.50
Raccoon			
Lynx			
Total	91,270		\$2,976,423.50

DEPARTMENT OF AGRICULTURE

NUMBER OF ANIMALS PELTED ON FUR FARMS IN ALBERTA 1946-47

Kind of Pelt	Total No. of Pelts	Av. Value Per Pelt	Total Valuation
Fox, Standard Silver	6,548	\$15.00	\$ 98,220.00
Fox, White Marked Silver	5,893	14.00	82,502.00
Fox, Platinum	2,905	35.00	101,675.00
Fox, Pearl Platinum	306	46.00	14,076.00
Fox, Pearlatina	115	40.00	4,600.00
Fox, Arctic Blue	919	12.00	11,028.00
Fox, Arctic White	11	15.00	165.00
Fox, Cross	147	20.00	2,940.00
Fox, Red	56	10.00	560.00
Mink, Standard	120,034	14.65	1,758,498.10
Mink, Platinum	873	42.00	36,666.00
Mink, Silver Sable	343	16.50	5,659.50
Mink, Black Cross	1,957	14.00	27,398.00
Mink, Blue Cross	61	14.00	854.00
Mink, 95% White	300	41.00	12,300.00
Mink, White	19	43.00	817.00
Mink, Pastel	19	38.00	722.00
Mink, Royal Silver	31	12.00	372.00
Mink, Ebony Blue	2	12.00	24.00
Mink, Half Blood Platinum	666	14.00	9,324.00
Chinchilla	64	35.00	2,240.00
Marten	4	50.00	200.00
Fitch	402	3.50	1,407.00
Lynx	4	35.00	140.00
Nutria	19	2.50	47.50
Raccoon	19	2.25	42.75
Total	141,717		\$2,172,477.85

LICENSED FUR FARMS IN ALBERTA 1946-47

Fox	146
Mink	1,077
Fox and Mink	98
Chinchilla	18
Fitch	10
Lynx	1
Marten	6
Nutria	1
Raccoon	1
Total	1,358

REPORT OF APICULTURE BRANCH

W. G. LE MAISTRE, Provincial Apiarist

The honey crop of 6,507,475 pounds is a new record for Alberta. This Province places second in Canada for honey production in 1947. The average production per hive of 84 pounds is 5% below the five-year average of 88 pounds per hive. There was an increase of 7% in the number of hives and a reduction of 14% in the number of beekeepers.

Statistics:

	Total Production 1000 Pounds		Average Net Price per Pound		Value in \$ 1,000 dollars	
	1946	1947	1946	1947	1946	1947
Honey	6,200	6,500	16c	22c	992	1,480
Beeswax	87	91	45c	45c	39	41
					<u>1,031</u>	<u>1,471</u>

	1946	1947	% Change
No. of Beekeepers	11,000	9,500	—14
No. of Hives	72,000	77,000	7
No. of Hives per Beekeeper	6.5	8.1	13
Production per Hive (ave. in lbs.).....	86	84	2

General.

Wintering is not commonly practised in this Province. Only 9,600 hives were placed into winter quarters, and of these, 3,100 died, or were unproductive in 1947. This winter loss of 33% discourages it as a general practice. Experiments have shown that wintering can be profitable. Somewhat greater skill is necessary, and this has not yet been acquired by many.

About 71,000 of Alberta's 77,000 colonies were established from package bees imported in the spring from California, Alabama, Mississippi and Louisiana. The delivered cost of these packages was from \$5.25 to \$7.50 per two-pound package and from \$6.50 to \$9.00 per three-pound package. Losses amongst imported packages, largely from queen failures, were 8% as compared with 10% in 1946.

A considerable change has been taking place during the last four or five years in the character and distribution of honey production. In 1940 most of the honey was produced in the irrigated districts of southern Alberta. Since 1940 clover growing for fertility in the gray soil areas and a boom in sales of clover seed have extended the beekeeping areas tremendously. The sugar shortage encouraged a large number of people to augment their sugar supplies with honey.

The result has been that now most of the honey is produced by small operators and in central and northern Alberta.

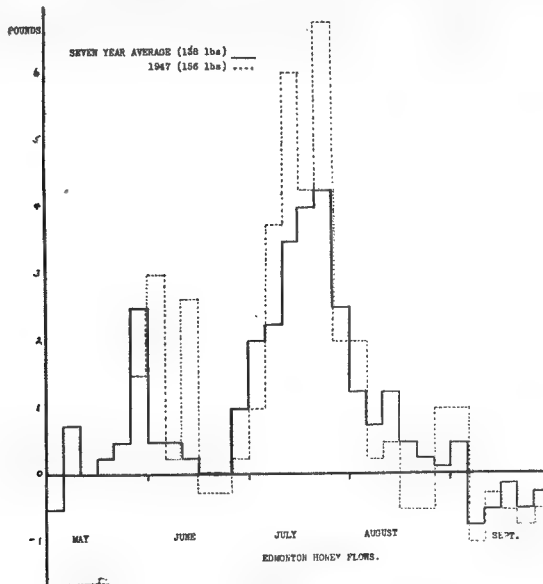
There were 2,200 beekeepers operating an average of 10 hives each in 1940. There are now 9,500 beekeepers operating only eight hives each.

Season.

The weather in April seemed to be suited to the development of colonies; May weather was very unsatisfactory, there being few days during which flight was possible. The usual May honey flows did not occur until June. Colonies did not build up to

strength by the start of the main flow in many districts in spite of the fact that the main flow did not begin as early as usual.

The main honey flow was good in most districts. It began early in July and lasted into the first week of August. It was from poor to very poor in southern Alberta. This was attributed to heavy frosts occurring May 28th and 29th. Some other districts seemed to have been too dry.



Graph showing seven-year average and 1947 honey flow for City of Edmonton

Marketing.

Rationing and price control on the sale of honey ended before there was any honey extracted. The wholesale price rose from 18c per pound to 21c, with some sales being made at higher prices. The demand was good up to November. Most of the stores were then well supplied and the demand fell off. The price and termination of sugar rationing may have slowed sales.

Disease Control.

Nineteen inspectors were employed, though some of these devote only very few days to the work. There is some difficulty in persuading suitable men to undertake this type of work.

	1946	1947
No. of Hives Inspected	6,120	7,250
No. of Apiaries Inspected	706	878
No. of Hives Diseased (AFB)	127	317
Diseased Hives as % of total	.18	.43

A diagnostic service for bee diseases is provided. Any beekeeper in doubt as to the nature of a disease observed in a hive may send in a sample. He is advised of the nature and treatment of the disease diagnosed.

American Foulbrood	20
European Foulbrood	3
Sacbrood	6
Not Diseased	11

Registration of all people operating colonies is required annually so that inspectors may be able to locate colonies when in any area. There is some difficulty in persuading everyone to comply with this requirement.

	1946	1947
No. of Beekeepers Registered	9,000	8,000
No. of Beekeepers not Registered	1,500	1,500
No. of Hives Registered	58,000	64,000
No. of Hives not Registered (est.)	14,000	13,000

Honey Grading.

Beekeepers have decided that grading regulations should be applied on honey. A set of regulations were drafted and are under consideration. A testing laboratory has been established so that any producer can submit samples and obtain a grading on them to aid him in marking his pack. 1,400 samples were graded.

Extension.

It was not possible to meet all the demands for lectures, demonstrations and field days. However, speakers were provided for 54 such occasions. Approximately 5,000 bulletins were distributed to those requesting them.

Beekeepers' Organizations.

Alberta beekeepers have organized about 50 local beekeepers' associations. These are largely fraternal, though some do provide certain items such as package bees for their members. Many of these are affiliated to form the Alberta Beekeepers' Association. The officers are elected at the annual convention. The secretary is the Provincial Apiarist. One of the great values of these associations seems to be that they improve the general level of production through exchange of information. They form a valuable point of contact between the Department and the producer.

Considerable effort has been put into providing the industry with facilities for obtaining supplies and to organize its marketing. The Alberta Honey Producers' Co-operative has through the guidance of this Branch become established as an agent to do these things. It now has set up its own offices and building and seems to be in a good position to serve the industry.

Sugar.

This Branch was the only authorized agent in Alberta to issue sugar permits for beekeepers requiring sugar to feed their bees. Approximately 10,000 applications for permits were received.

REPORT OF THE SCHOOLS OF AGRICULTURE BRANCH

S. H. GANDIER, Superintendent.

F. N. MILLER, Principal, Olds School.

N. N. BENTLEY, Principal, Vermilion School.

The Province is served at present by two Schools of Agriculture and Home Economics located at Olds and Vermilion. The Schools of Agriculture policy was instituted in 1913 and has operated continuously since that time. The prime purpose of these schools is to provide training to young men and women of rural communities in preparation for their life's work on the farm and in the farm home. A total of approximately nine thousand young people from all areas of the Province have attended the regular five-months courses since the schools were first established 34 years ago, and the vast majority of these are now engaged in farming for themselves. A small percentage have continued to the University, and upon graduation have entered the professional fields of Agriculture and Home Economics in many different capacities. Quite a number of these have risen to highly responsible positions in their chosen profession, both within the Province and elsewhere. A brief history of the Schools of Agriculture since their inception is contained in our annual report for 1945.

GENERAL REVIEW

The regular courses for 1946-47 closed on April 9th, with the usual graduation exercises following successful terms with near capacity registration being maintained at both schools throughout the fall and winter. Reference is made below to short courses and other summer activities. The schools reopened in the fall for the regular courses on October 21st and the term continues through to April 7th next.

Excess of Applications.

Popularity of the regular course in Agriculture from October to April continues at a high peak. All applications for the second year of this course were accepted for the current school term, but it was found necessary to refuse 130 applicants for the first year and Two-in-One courses in Agriculture for lack of accommodation. This number is about 30 less than the excess of applications in the previous year. The Applications Committee met on August 6th to review the situation. It recommended that the applications of boys 17 years of age (minimum age for entrance) might be held in abeyance to permit acceptance of the older applicants. As a result, most of the applications not accepted are those of younger boys, and these will have priority for the 1948-49 term. It was further recommended that applications from other Provinces be not accepted in order that all accommodation might be reserved for Alberta applicants. Approximately 20 applications were received from outside the Province.

The problem of surplus applications does not apply to the Home Economics courses. This fall all eligible applications were accepted and accommodation for girls was not fully taken up at either school. This is a matter of some concern at both schools. It will have consideration before another school term to determine whether the courses in Home Economics as offered at present are adequately meeting present-day needs.

Current Term Registration.

The registration of the two schools for the current fall term totals 356. Of this number, 241 are enrolled in Agriculture and 115 in Home Economics. These numbers are somewhat lower than for the previous year due partly to the smaller registration of girls, and to some extent to unfavorable harvesting and crop conditions in some districts, which caused late cancellation of a few applications.

Policy of Expansion.

It was mentioned in our report for 1946 that the unprecedented demand of recent years for the type of training offered by the Schools of Agriculture had prompted consideration of expansion of present school plants, or the possible establishment of a third school. Certain appropriations were set aside in the government estimates for this purpose in the event that a policy of expansion were decided upon during the current fiscal year. Government authorities have not made any announcement to date to indicate that such action may be immediately pending. It has been intimated that any extensive programme of construction should possibly be delayed for a while when supplies of building materials may be more plentiful and construction costs at a more reasonable level.

Summer Programme.

The most efficient use of the school plants and the teaching staffs from spring to fall, while the regular courses are not in session, is an important consideration in planning the summer programme at each school.

Instructional activities through the summer were confined mainly to the summer short courses for both young people and adults. They occupied the latter part of June to early August. The programme of courses is not identical at the two schools, but is arranged to some extent to meet the particular needs of the districts they serve. The addition of a couple of new courses at each school in the last two years has brought the short course list to seven at each centre. They include Young Farmers' Course, Livestock and Crop Clubs Week, Club Leaders' Conference, Girls' Clubs Week, Farm Women's Week, Quantity Cookery Course, Ex-students' Refresher Course, One Week Course in Sewing, and a course for Boys' and Girls' Camp sponsored by Vermilion Fair. Total attendance for all the short courses at the two schools this year was over nine hundred.

Each year the schools are coming to be used more and more through the summer by the Department and by agricultural and educational organizations as meeting places for conferences and

conventions. They provide ideal accommodation for such gatherings and in turn receive a good deal of favorable publicity through them. Some of the more important gatherings held at the schools in the past year were: Convention of Alberta School and Home Federation, conference of Leaders of Garden Clubs, District Teachers' convention, conference of Department Extension Workers, local District Sale of Purebred Livestock, constituency convention of Women's Institutes. It was found necessary to refuse convention accommodation to a number of organizations whose activities are not related to agriculture and rural life.

It is gratifying to note that in the past two or three years the schools are being used more freely as visiting centres by various agricultural organizations and by the farming public. Scarcely a day passes in the summer months without its quota of interested visitors. Field Days are frequently arranged for the benefit of groups such as Livestock Associations, Junior Crop and Livestock Clubs, excursions of farms organized through the District Agriculturists, and many others.

Activities above mentioned, together with supervisory work on experimental plots, the school farms, gardens, orchards and campus, provide permanent summer employment to a number of the Instructors. The remainder, when not required for school duty such as short courses, are absorbed by Extension and other Department branches in various capacities in their summer programmes.

Staff Changes and Additions.

There was one retirement from the staff of the Olds School under the Superannuation Act in the person of W. S. Benn, Instructor in English and Mathematics, after 27 years of faithful and efficient service. Mr. Benn entered the service as a member of the Raymond School staff in 1920, served also on the Claresholm School staff before going to Olds in 1931. Transfer of A. T. Kemp, Instructor in Horticulture and Botany at Olds, to lighter duties with the District Agriculturist service was arranged on account of ill-health. Mr. Kemp has been a valued member of the Olds staff for more than 20 years.

Several Instructors resigned their positions at the close of the winter term to accept more attractive positions elsewhere. Most of the vacancies were satisfactorily filled before opening of the regular fall term. Further information with respect to these changes is contained in the Principals' reports.

Revising Courses of Study.

In order that the training offered at the Schools of Agriculture might be kept in line with more recent advances in farming and in standards of rural living, a thorough overhaul of the regular courses of study in both Agriculture and Home Economics was undertaken this year. Committees composed of staff members from both schools were assigned the task of bringing in recommendations for revision of certain courses. After several conferences redrafts of contents of courses in the following subjects were submitted: Farm Mechanics, Dairying, General Science, Sewing, Cooking, Laundering, Household Administration and Handicrafts. These new outlines will be further

examined before their final adoption. These conferences have served another useful purpose in bringing the two staffs together for discussion of mutual problems in both instructional and administrative matters. It is planned that remaining major subjects of the courses will be redrafted in 1948.

Improvements in School Properties.

This year, a fairly extensive programme of new construction and renovation was undertaken at both schools under the direction of the Department of Public Works.

The largest project for the Olds School was purchase of the drill-hall at the Bowden Flying School and its transfer to the Olds campus for use chiefly as a Farm Mechanics building. Its re-erection is not yet complete and it will not be ready for school use until the fall of 1948. Acquisition of this building will relieve crowded classroom conditions, especially in Farm Mechanics, and places the Olds School on equal footing with the Vermilion School in this respect. Lesser projects completed at Olds include: Insulation and stuccoing of three dwellings; installation of new heating unit in Principal's house; completion of third well for water supply; enlarging main entrance to the school grounds; exterior completion of extension at boys' dormitory.

At the Vermilion School, the programme of rehabilitation and new construction commenced in 1945 when the school was re-opened for classes, was continued during 1947. The main work accomplished was: Stucco jobs completed on old shop building, three new staff dwellings, farm dairy and two farm cottages;



NEW FARM MECHANICS BUILDING, OLDS

permanent stage with dressing rooms constructed in gymnasium; fume exhaust system installed in mechanics building; top floor of old college building converted into two fine classrooms; east end of army stores building converted to field husbandry classroom; general repair and repainting of farm barns and corrals; some progress with laying of concrete walks.

During the war period when the Vermilion School was closed, 1941 to 1945, little attention was given the school grounds, gardens and orchard. Much labor has been required in the past two seasons to bring them back into reasonable condition. Most of the orchard was lost through neglect and fireblight and is being replaced. This year the highway along the front of the school property was improved by planting of spruce trees along the north side and seeding down of roadsides.

In 1946 the town of Vermilion commenced the installation of a town sewage and water system and expected to complete it this year. As the present sewage system at the Vermilion School is inadequate, it was arranged that the entire school plant would be serviced by the new town system. Scarcity of materials has prevented construction of the sewage disposal plant, therefore the school has been obliged to get along at considerable inconvenience with the old septic tank system. Conversion of one of the army barracks buildings to an auxiliary dormitory for boys depended upon sewage connections with the town, and this project had to be abandoned for the present.

Miscellaneous.

Graduating classes in April were the largest in the history of both schools. At Olds 83 diplomas were granted in Agriculture and 41 in Home Economics; at Vermilion 78 in Agriculture and 34 in Home Economics; total 226.

In the past two terms considerable numbers of ex-service men and women have been allowed certain priorities for admission to the courses under training benefits through the Department of Veterans' Affairs. In the current term these numbers are much reduced because time limits for these benefits are being reached. Total of ex-service personnel now receiving this aid is 21 men and three women.

Health of the student bodies at both schools has been well maintained during the past year, there being no very serious epidemics of the ordinary communicable diseases. The Olds School was troubled with "flu" for a time last winter, but the Vermilion School has been particularly free of illness throughout the year. The resident nurses, with the advice of local doctors, have performed their duties capably.

The student bodies of both schools are encouraged in the principles of self-government in their social and dormitory life through Student Councils, which have staff representation. These Councils are proving of great help to the school authorities in maintaining harmonious relationships in all phases of school life and in routine discipline.

One of the most valuable assets of any school is a strong, active Alumni Association. The ex-students of the Vermilion

School kept their organization alive during the war years when the school was closed and have assisted greatly in reviving school tradition and the old school spirit amongst the new students since the reopening in 1945. The Alumni Association of the Olds School, whose activities have not been so marked of late years, underwent some reorganization during the summer and again is undertaking quite an active programme.

A valuable addition to the teaching equipment at each school this year is an up-to-date moving picture machine with sound projector. Formerly the schools depended upon equipment loaned by the Extension Branch and much of the class work now is greatly facilitated by having a machine on hand for use at all times. The value of visual aids for certain class work is rapidly growing.

We are grateful to many of the leading farm machinery companies for the loan to both schools of their latest models in many lines. The large floor space provided in the new Mechanics Buildings now permits proper and safe storage of all machinery on loan. The amount of new machinery now made available for demonstration and class work is almost unlimited, and it follows that the course in farm machinery is greatly improved.

The experimental and demonstration plot areas were continued at both schools during the 1947 season in co-operation with the Cereal Division of the Federal Department of Agriculture and the Plant Science Department of the University of Alberta. On the black soils at the Olds School the main work is with variety and fertilizer tests on grains, forage crops and potatoes. Similar tests with grains and legumes are conducted on a number of grey soil farms in the Kevisville, Sundre, Cremona areas west of Olds. At Vermilion only a comparatively small area has been set aside for plot work since reopening of the school. In addition to the work done in co-operation with the Dominion and the University, some plots were planted for local demonstration and field day purposes and for the production of classroom materials. Results of all plot work will be submitted at a later date in a separate report when threshing of samples and tabulation of results are completed.

The school farms are operated mainly to produce feed for the flocks and herds carried for livestock instruction and to provide necessary supplies of meat, eggs, milk and vegetables to the school dormitories. Other sources of farm revenue are through the sale of young stock to farmers from the purebred herds of Angus, Shorthorn and Holstein cattle at Olds, Suffolk sheep at Vermilion, and Yorkshire swine at both farms.

YOUTH TRAINING PROGRAMME—Schedule "E"

No activities were carried during the winter of 1946-47 under schedule "E" of the Dominion-Alberta Youth Training Programme. Improved conditions with respect to supplies of new farm machinery and repair parts are responsible for discontinuance of the Farm Repair Schools which operated from 1942 to 1946. The service undertaken by these schools will be incorporated with the instruction given at the short courses in

Agriculture conducted under Schedule "A", if and when they may be continued.

A five-month diploma course in Dairying for the training of factory workers was approved in the fall of 1946, but as there was no financial provision for this under Schedule "E", it operated last winter under Schedule "K". The course was put on by the Dairy Department of the University with 13 trainees in attendance. For the fiscal year of 1947-48 this course was provided for in Schedule "E". It opened on November 3rd at the University with a registration of 13 trainees. This number is somewhat disappointing as the University is prepared to handle at least 20 men for training. The course is likely to be continued next year and will be more widely publicized by the dairy industry.

(For further details of the year's operations at the Olds and Vermilion Schools of Agriculture, see appended reports of the Principals.)

REPORT OF SCHOOL OF AGRICULTURE AND HOME ECONOMICS, OLDS

(F. N. MILLER, Principal)

The 1946-47 term was brought to a close on April 9th, when diplomas in Agriculture were presented to 82 men and one woman, and diplomas in Home Economics to 41 women. This constituted the largest single graduating class from a School of Agriculture and Home Economics in the history of the Alberta Schools.

We were pleased to have at our closing exercises the Hon. E. C. Manning, Premier of Alberta; Hon. D. B. MacMillan, Minister of Agriculture; Mr. O. S. Longman, Deputy Minister, and Dr. J. B. Munro, Deputy Minister of Agriculture for British Columbia, whose son, Eric, was one of the graduating students. Premier Manning was the guest speaker.

The valedictorian was Robert Dudley of High River.

Scholarships were presented as follows:

The Alberta Wheat Board Monies Trust Scholarships, each of \$100, tenable at the University of Alberta when they register for a degree course—Kenneth Krogman, Red Deer; John Wilson, Calgary; Gavin Kemp, Olds; Mary Parkinson, Olds; Victoria Miskew, Edmonton.

A scholarship to the value of \$75 to the student in Agriculture standing highest in the work of the first year—Elmer Wambold, Aldersyde.

A scholarship to the value of \$75 to the student in Home Economics standing highest in the work of the first year—Eve Allen, Alix. A. L. Searle Scholarship to the value of \$50 for progress in the first year's work in Agriculture—Shirley Kearns, Maple Creek.

The O. S. A. Girls' Alumnae Scholarship of \$50.00 to the student in Home Economics who made satisfactory standing in academic work and also made contributions to the athletic, social and literary life of the school—Anne Rodvang, Throne.

The O. S. A. Experimental Union Scholarship of \$50 awarded on the same basis as the above—David Stelfox, Rocky Mountain House.

The Alberta Women's Institute Scholarship, also of \$50, for a first year student in Home Economics who had a creditable scholastic record, who made valuable contributions to the life of the school, and who displayed talent for leadership—Edith Rodvang, Throne.

Two Robert Gardiner Memorial Scholarships of \$50 each in honor of the memory of the late Robert Gardiner and offered by the United Farmers of Alberta, one in the first year of the Agricultural course and one in the first year of the Home Economics course, for proficiency in those subjects that deal with basic education and with training in the economics of farming and home-making and in rural leadership—George Braithwaite, Red Deer and Hazel Ralston, Haynes.

Approximately eighteen graduates are presently in attendance at the University of Alberta from the 1946-47 class. This is, no doubt, one of the largest, if not the largest, number of students proceeding to the University from a graduating class at the O. S. A. Of the five girls registered at the University, three are taking Household Economics and two are enrolled in Education. Twelve boys are taking Agriculture and one is taking Arts and Science.

Enrolment.

The minimum age for admission according to the 1947-48 Calendar is 17 years. Despite this fact, all the enrolled students in Agriculture at Olds are 18 years old or over. In the course in Home Economics it was possible to enrol all applicants 17 years of age and over. Ninety agricultural applicants had to be refused because of lack of accommodation. Fifteen of these were from outside Alberta. The applications of fourteen students were transferred to the Vermilion School of Agriculture just before the commencement of the term.

Because of the late fall and generally poor harvest weather a few students were unable to attend this fall as they had hoped. Weather hazards during the growing season, such as hail and frost also were influential in keeping a few prospective students away this year.

Following is the enrolment at the Olds School of Agriculture and Home Economics for the term 1947-48:

First Year Home Economics	29
First Year Agriculture	48
Two-in-One Home Economics	17
Two-in-One Agriculture	43
Second Year Home Economics	14
Second Year Agriculture	30
Total	181
Agriculture	121
Home Economics	60

Ex-service men and women are again playing an important role in our students' affairs. Although the number attending is not as large as last year the quality is still there. There are 16 ex-service men and 2 ex-service women. The president of the Students' Council and the editor of the Year Book are both ex-service men.

Out of the 181 students in attendance, 48 are past members of Alberta Junior Farm Clubs.

This fall three students were admitted from far off countries. Sally Cunningham, two-in-one Home Economics, flew across the Atlantic from Westcliff, Essex, England, and then to Edmonton to arrive at Olds just in time to register for the 1947-48 term. Christopher L. Marshall, arrived a little earlier from Spur Tree, Jamaica; and Kevin McDowell, although arriving late, came all the way from Bombay, India. Messrs. Marshall and McDowell are registered in the two-year course.

The educational standing of students now entering the Schools of Agriculture and Home Economics is considerably higher than it was some years ago. According to a survey made in 1944 the standings of students was as follows:

- (1) 80% of students better than Grade VIII.
- (2) 55%, Grade X or higher.

When the school opened in 1913 there were fewer than 10% with better than Grade VIII standing.

A survey of the present educational status of students reveals the following figures:

Below Grade VIII	Grade VIII	Grade IX	Grade X	Grade XI	Grade XII
1	12	25	35	46	61

In addition to the above there is enrolled this year an ex-serviceman who has an honors B. Sc. degree in Physics from Manitoba University. As he has taken up farming as his life's work he has registered at our school to get practical training in agriculture.

Staff Changes.

Miss Gwen Caverhill, B.Sc., a graduate in Household Economics from the University of Alberta, and employed by the Consumers Gas Company, Toronto, was appointed instructress in Cooking, Household Administration and Girls' Physical Training to replace Miss Lillian Cheladyn who returned to work with the Women's Extension Branch. Miss Caverhill had several years' teaching experience before attending the University. She hails from the Lacombe district.

Mr. Fred C. Jorgenson of Sadalia was appointed Dean of Men to replace Mr. Edwin Patching who resigned to join the staff of the Alberta Wheat Pool in Calgary. Mr. Jorgenson was a teacher before his appointment to our staff. He is giving instruction in English, Mathematics and Economics in which capacity he replaced Mr. W. S. Benn who was superannuated in September.

Mr. Harlow Sutherland, B.S.A., a farmer of Olds district, was appointed instructor in Chemistry and Physics to replace Mr. C. E. Yauch who is now giving instruction in Field Husbandry and Botany. Mr. Sutherland is a graduate of the University of Minnesota.

Mr. H. L. Christie of Cardston was appointed as instructor in Animal Husbandry to replace Mr. W. C. Gordon who joined the Extension Service Staff as District Agriculturist at Ponoka. Mr. Christie is actively engaged in farming and ranching in the Cardston district. He is a graduate of the University of Alberta and has completed one year's post graduate work as well.

Miss Margaret McKim, R.N. of Calgary, joined the Staff as School Nurse to replace Miss K. Yellowlees who resigned and is now living in Scotland. Miss McKim is a graduate of the Holy Cross Hospital, Calgary.

Miss Eva M. Heaver, R.N., of DeWinton, replaces Miss E. Dixon, as instructress in Home Nursing and assistant School Nurse. Miss Heaver was a student at the O. S. A. during the term 1943-44.

Mr. A. T. Kemp was transferred from the School Staff to the District Agriculturist Service. He is assistant district agriculturist at Olds.

New Buildings and Constructions.

The building expansion programme is manifesting itself in the form of an Air Force Drill hall being erected on the campus behind the shops and beside the Animal Husbandry building. This drill hall, moved from the Bowden Airport, is to be known as the Mechanics Building and will, on completion, house the future Farm Mechanics and Building Construction classes. The building is 110 feet wide and 160 feet long. There are eleven trusses in all supporting the roof. Much work has yet to be done before it is completed but it should be fairly well in order for use by the beginning of the 1948-49 term. The new Mechanics Building will meet a long felt need at the Olds School of Agriculture and the additional accommodation will surely serve to make for a better and more efficient course in Agricultural Engineering.

The residences on the campus were insulated and stuccoed this year as part of the improvement policy to be carried on for the coming years.

The construction of the skating rink, although commenced last year was completed this summer. We now have a very good set-up and we feel proud to say that it was entirely built with student and staff labor and largely financed through Students' Union funds.

A new bull corral was constructed on the farm for use in connection with the Livestock Breeding Laboratory.

The School Grounds.

Work on the re-arrangement of the entrance to the School grounds was commenced during the summer. This work will be completed next year. The entrance has been widened giving greater accommodation to traffic entering and leaving the grounds. At the same time some of the trees were removed in order to provide a clearer view of the passing traffic on the Calgary-Edmonton Highway. Several serious accidents have occurred here in the past.

All the school roadways were gravelled so as to provide a neat appearance and to improve the general condition of the grounds and driveways.

Summer Courses.

The following courses of one week's duration were held at the Olds School of Agriculture and Home Economics last summer.

- (1) Short Course for Young Farmers, June 16-21st—14 registered.
- (2) Quantity Cookery and Sewing Courses, June 30-July 5th—50 registered.
- (3) Junior Club Week (Farm Clubs), July 7-12th—73 registered.
- (4) Home and Garden Clubs (Girls), July 14-19th—68 registered.
- (5) Special Sewing Course, July 14-19th—7 registered.
- (6) Farm Women's Week, July 21-26th—113 registered.
- (7) Women's Institute Girls' Clubs, July 28-Aug. 2nd.—112 registered.

The Staff of the Olds School of Agriculture together with assistants from the Department of Agriculture provided lectures and special demonstrations for these courses. During Junior Farm Club Week, four 4-H club members were present from the State of Montana. They were accompanied by Mr. J. C. Taylor, Director emeritus of Agricultural Extension Service for the State of Montana. The 4-H guests were as follows:

Miss Dorothy Worf, Forsyth, Montana—Rosebud County.

Miss Avalon Fuller, Anaconda, Montana—Deer Lodge County.

Mr. Arthur Bouchard, Sidney, Montana—Richland County.

Mr. Lloyd Smiley, Eden, Montana—Cascade County.

Tests were given at the end of the weekly courses for the juniors and scholarships of \$75.00 each tenable at Olds or Vermilion in 1947-48 or 1948-49 were awarded.

Farm Women's Week still continues to be one of the most enjoyable and successful courses being held during the summer. This year the course was probably more successful than last year for two reasons—there were fewer women registered—113 as against 180 last year—and the course was therefore not too crowded and the programme was somewhat lightened so that farm women had more time to rest and make new friends.

The highlights of the programme were the demonstrations and talks by P. D. Hargrave, Superintendent of the Provincial Horticultural Station, Brooks.

Considerable assistance was given to the Extension Service of the Department of Agriculture during the summer. Mr. M. W. Malyon did testing work for the Dairy Branch; Mr. F. F. Parkinson was used on the farm machinery field days and Mr. W. C. Gordon assisted Mr. G. S. Black, Supervisor of Junior Activities, with his work. Miss F. C. McIntyre and Miss H. V. Moseson both worked with the Women's Extension Branch.

Special Events at the School.

The Convention of the Alberta Federation of Home and School Associations was again held at the School during the week of April 15th. There were 146 in attendance.

From April 21st to 23rd the Garden Clubs of the Province held a Club Leaders' Conference. In all there were 26 leaders in attendance. As the first venture of this kind in the Province it proved an outstanding success.

A conference for Junior Farm Club Leaders was held at the School on August 4th - 6th. Approximately 35 leaders registered for the course.

On July 12 and 13th a group of Junior Club members from the Morinville and North Edmonton district visited the campus. They were chaperoned by J. M. Fontaine, District Agriculturist at Morinville. There were 45 in the group.

Mr. N. F. Bell, District Agriculturist at Drumheller also brought a group of Junior club members to the School on August 8th. While here these young people inspected all the shops, classrooms and the livestock on the farm.

The School Farm.

The farm, under the capable management of Mr. Walter K. Ross, consists of approximately 600 acres. It is conducted primarily as a livestock farm with the crops grown being fed to stock. Much of the milk, cream, meat, and eggs required in the dormitory is supplied by the farm. This fall sixteen Hereford feeder steers were again purchased for finishing, fitting and slaughtering demonstrations.

The crop this year consisted of 225 acres of oats and barley and 75 acres of hay. As the month of July was generally hot and dry there was no second cutting of hay. About 80 tons of good quality hay was put up. In spite of the dry summer the grain crops held up very well. The total oats threshed was 11,241 bushels and barley 2,800 bushels. Twenty tons of green feed and 70 tons of silage were put up. Even though a considerable number of livestock were carried during the summer the pasture held up very well.

We still maintain three cattle herds—Aberdeen Angus, Shorthorns and Holsteins—all fully accredited. The main function of the stock is for instructional purposes. However, considerable breeding stock is sold to Alberta farmers and there has been a good demand and several good sales were made during the year. We have disposed of the Hampshire sheep mainly because of the shortage of pasture. Yorkshire hogs are still being maintained as in former years. During the late summer and early fall months there was a notable slackness in sales of swine breeding stock but quite recently these sales have picked up again. We feel that an average of 200 hogs should be kept on the farm. We are endeavoring to find sale for some of our Percheron horses. However, the outlook is not too bright. Although most of the farm work is done by tractor, use is still found for a couple of teams of horses.

All in all we had a successful year both in crops and livestock.

REPORT OF SCHOOL OF AGRICULTURE—VERMILION

(N. N. BENTLEY, PRINCIPAL)

On April 9, 1947, diplomas in Agriculture and in Home Economics were presented to members of the largest graduating class in the history of the Vermilion School of Agriculture.

The immediate post-war demand for training in vocational agriculture which led to the reopening of the School in the Fall of 1945 continued into 1946 when all available accommodation was filled, and approximately one hundred applications for enrolment had to be refused. In order to provide priority to ex-service personnel, and to older applicants, all applications were filled as they were received until August 1st, then acceptances were issued on this basis, with the result that only those applicants eighteen years of age or older were admitted to the classes in Agriculture. Again, in 1947, this practice was adopted and, with only a few exceptions, no applications from prospective Agriculture students under eighteen years of age could be accepted.

In the Home Economics classes, however, all applications received from girls who had reached the minimum age of seventeen years, as established in the regulations, were accepted. In 1946 this resulted in a total of 72 girls being registered, but in 1947 only 54 students entered the Home Economics classes. Since facilities for class-room and dormitory accommodation permit the admission of 75 girls, the fact that a smaller number entered in 1947 is a matter of some concern.

The desirability of giving more publicity to the advantages of the Home Economics course was reported in 1946, but the continued decline in the number of applications appears to indicate that some attention should be directed to the course itself with a view to broadening its objective, so that it might offer training for immediate remunerative employment as well as for "Home Making". The possibility of providing for some optional specialization in the graduating year, and the giving of some attention to employment opportunities appears to warrant investigation.

Many enquiries about the courses were received and calendars were forwarded to several hundred prospective students who were apparently interested, but who eventually did not submit applications for admission, but it was quite evident that many of the older girls making these enquiries were desirous of training to qualify themselves for immediate employment. Although numerous applications for both the Agriculture and for the Home Economics courses were cancelled shortly before the term commenced, the majority of the cancellations were for the Home Economics course.

THE 1946-47 TERM

A total of 214 students were registered in all classes as follows:—

Agriculture		Home Economics	
First Year	56	First Year	35
Second Year	54	Second Year	27
Two-in-One	32	Two-in-One	10
	142		72
		Total registration	
		214	

At the end of the term diplomas in Agriculture were granted to 78 students and in Home Economics to 34 students.

A number of innovations resulting from the development of the courses, and made possible by additional facilities, were introduced during the term. Five buildings were actually constructed by the carpentry classes in the Mechanics building as part of the regular course work in Farm Buildings. These included a poultry brooder house, a range house, a granary, a garage and a greenhouse, each one being a group project by a shop division of the graduating class who studied plans, computation of material requirements, and the lay-out of the construction programme. They then carried out the project to completion including trim, fixtures and paint.

The poultry brooder house was completed in time to use it to house three hundred baby chicks which were raised to eight weeks of age as a practical study project by the poultry classes.

The apartment duties for girls in the graduating classes were enlarged to include observation periods in the kitchen of the school dormitory, assignments in large-scale cookery and waitress duties in the dining room.

In addition to work of the regular courses, members of the staff devoted considerable attention to the encouragement of a wide variety of extra-curricular activities under the direction of the Students' Council and to include special features whenever opportunities occurred; the purpose of this effort being to broaden the scope of students' interests and experiences and to develop ability and leadership for community organization.

Guest speakers included: Hon. E. C. Ansley, Minister of Education; Mr. Donald Cameron, University of Alberta; Mr. F. J. Fitzpatrick, Department of Trade and Industry; Mr. F. H. Newcombe; Mr. Geo. Black; Mr. Wm. Pidruchney; Mr. C. W. Traves; Dr. Ross Walton; Mr. R. M. Putnam; Mr. S. H. Gandier; Mrs. Vera G. MacDonald; Miss M. K. Fraser and Miss B. J. Lewis of the Provincial Department of Agriculture.

Special Events and Featured Activities Included:

A visit by 26 students and two staff members from the Olds School of Agriculture; a curling bonspiel, in which twenty student rinks participated; an Ice Carnival parade; presentation of three one-act plays by the students; a dramatics programme by a touring Little Theatre group; regular publication of a school paper and publication of a year book, involving an expenditure in excess of \$1,100.00.

Guest judges at the Little Royal and Achievement Day, which attracted approximately 700 persons, included: F. H. Newcombe,

Geo. S. Black, W. E. Robinson, Professor J. MacGregor-Smith, Miss Ruth Whaley and Miss M. K. Fraser.

Dr. Robert Newton, President of the University of Alberta, was the guest speaker at the graduation exercises, while the Department of Agriculture was represented by Mr. R. M. Putnam and Mr. S. H. Gandier.

Generous support in the form of scholarships and prizes was given by many business firms and organizations, who made available the most attractive listing of awards in the history of the school.

Winners of Scholarships were as follows:—

To members of the Graduating Class: (tenable at the University of Alberta)

The Alberta Wheat Board Surplus Trust Scholarships, each of \$100.00: Ronald J. Harvie, Edmonton; Everett McCrimmon, Bon Accord; Sandy Chibree, Edmonton; Jenney Lemmetty, Newbrook.

To members of the First Year Class: (tenable in the 2nd year course)

The United Grain Growers' Scholarships, each of \$50.00: Noel Garnett, Vermilion; Richard Bennett, Ranfurly; Edith Sayer, Ribstone.

The Alberta Wheat Board Surplus Trust Scholarships, each of \$75.00: Eva Shand, Provost; Wm. S. Baranyk, Heinsburg.

The V. S. A. Alumni Scholarships, each \$50.00: Donald Round, Clyde; Betty Young, Millet.

The Vermilion Board of Trade Scholarship, \$50.00 and gold medal: Robert Shopland, Rochester.

Craig Bros., Vermilion, Scholarship, \$50.00: Morrison Squair, Legal.

The Alberta Seed Growers' Association Scholarship, \$50.00: Maurice Burgess, Beaverlodge.

The Alberta Women's Institutes Scholarship, \$50.00: Helen Lange, Millet.

Prize Lists covering achievement in various aspects of the courses amounted to a value in excess of \$400.00. Contributors included: Imperial Oil, Limited; Craig Bros., Vermilion; Stephens Limited, Vermilion; T. Eaton Co. Ltd.; Johnstone-Walker Ltd.; Robert Simpson Ltd.; British-American Oil Company; The Alberta Livestock Co-operative; The Alberta Poultry Producers; The Vermilion District Co-operative; The Nelson-Hill Hardware, Vermilion; The Singer Sewing Machine Company, Vegreville; The Columbia Theatre, Vermilion; Boake's Drug Store, Vermilion; Long's Drug Store, Vermilion; McLeod's Hardware, Vermilion; Northern Hardware, Vermilion; Wiebe's Bakery, Vermilion; Housez Studios, Edmonton; Simonson's Furniture, Vermilion.

Particularly valuable assistance was given by various firms in the matter of providing machinery and equipment for demon-

stration purposes in the Farm Mechanics work. Although this material was in exceedingly short supply, it was most essential to meet the objectives in this subject, and the assistance rendered by the following companies and their representatives was highly appreciated: International Harvester Co.; Massey-Harris Company; Cockshutt Plow Company; John Deere Plow Company; Waterloo Machinery (Alberta), Edmonton; Ford Motor Company; Canadian Fairbanks Morse; Imperial Oil Company; McLeods Limited; Electric Equipment (Alberta) Ltd.; J. I. Case Company.

The Summer Programme:

The wide range of Summer short courses, special events and field days conducted during 1947 brought a large number of persons to the School and increased the scope of the service being rendered to the public.

Short courses presented were as follows:—

Young Farmers' Week—June 16th to 21st.

Farm Women's Week—July 3rd to 8th

Junior Girls' Club Week—July 7th to 12th

Junior Farm Club Week—July 14th to 19th

Boys' and Girls' Short Course and Camp—July 21st to 26th

Alumni Re-union—July 31st to August 2nd.

The objective of Young Farmers' Week was to provide an opportunity for older farm boys and young men who were interested in agricultural education and a contact with agriculture, and yet were unable to get away from responsibilities at home for the duration of the regular winter courses. The original arrangement was that it would be directly linked with the activities of District Agriculturists who would undertake to secure substantial representation in the enrolment from each of their districts. However, this plan was not carried out by the District Agriculturist service, and the consequent enrolment was disappointing. Nevertheless, those attending were most enthusiastic and such a course can definitely serve a large number of young farmers if an effective scheme to publicize it can be adopted.

Farm Women's Week proved most successful. Eighty-four ladies registered for the regular course, but each day classes were supplemented by parties of visitors attending for special features. Assistance in arranging the programme was given by the Women's Extension Service and Miss Mabel Patrick of the Department of Home Economics at the University of Alberta was the guest speaker at the concluding banquet.

The short courses for Junior Farm Clubs and for Girls Clubs were held separately with attendances of 49 and 66 respectively.

Unless the number attending these courses is considerably increased, it would appear to be advantageous to schedule these to operate concurrently. Such an arrangement would decrease costs on the operation of the dormitory and would allow greater scope for social activity and entertainment of both groups.

The Boys' and Girls' Short Course and Camp in connection with the Vermilion Fair was attended by 64 boys and 63 girls. Studies and class projects conducted with these groups gave



VERMILION SCHOOL OF AGRICULTURE

special attention to the encouragement of interests associated with agricultural fairs. Attractive displays were prepared at the School and shown at the Fair.

One hundred and twenty-two former students registered for the Alumni Short Course and Re-union but much larger numbers attended the closing banquet and dance. Dr. Jack Howe from the University of Alberta, himself a former student, was the guest speaker at the banquet which was also attended by Mr. and Mrs. S. H. Gandier.

Assistance in making the arrangements for the programme and details in connection with the conduct of this Re-union was given by officers of the Alumni Association who were: President: Stanley Gould, Rosalind; Vice-President: Mary Hawrelak, Vermilion; Secretary-Treasurer: Laurence Blades, Ohaton. New officers elected for the 1947-48 term were: President: Florent Van Wageningen, Tolland; Vice-President: Josephine McLaughlin, Vermilion; Secretary-Treasurer: Laurence Blades, Ohaton.

The consistency with which Alumni Re-unions are well-attended, and the enthusiastic attitude of former students continues to be a source of considerable satisfaction to members of the staff.

Conferences and special functions held at the school during the Spring, Summer and Fall, included: Conferences between members of the staffs of the Olds and Vermilion Schools, considering the courses of studies; An Agricultural Extension Conference attended by District Agriculturists and Home Economists; A dramatics presentation by the University Provincial Players; A military ball; The Constituency Convention of the Women's Institutes; A visit by some 70 Junior Club members from Vegreville; A Junior Club Field Day for the Vermilion District; The United Church Sunday School Picnic; A Masonic Lodge Picnic; A Junior Club Leaders' Conference; The Vermilion, Vegreville and Wainwright District Teachers' Convention; A Sewing Short Course for ladies of the Vermilion District; A Pure-Bred Livestock Show and Sale; A Farmers' Meeting associated with the Better Farming Competition sponsored by the M.D. of Minburn.

In addition to the responsibilities associated with Summer Short Courses, conferences and special events outlined above, members of the staff engaged in a variety of other activities. Miss Lang and Miss Hawrelak were employed with the Women's Extension Service during most of the Summer. Mr. Hay was attached to Mr. Buckingham's office as Assistant District Agriculturist. Mr. Acheson conducted a series of Farm Machinery Field Days and other instructors attended numerous rural field days, farmers' meetings and fairs as guest speakers and judges.

The 1947-48 Term:

Although considerable progress was made by the construction company installing water and sewage services in the town of Vermilion, the project was not completed and no connections were made to bring these services to the School of Agriculture, consequently, no use could be made of additional dormitory ac-

commodation in the "H" huts at the eastern edge of the campus. The acceptance of applications from prospective students was therefore restricted to the number that could be comfortably accommodated in the main dormitory.

Because only 55 girls registered for the Home Economics courses, a temporary partition was installed in the third floor corridor so that six rooms of the Girls' Wing would be available to men students. This arrangement was reasonably satisfactory and permitted 120 male students to reside in the dormitory without employing the infirmary and lounge rooms as bedrooms.

Distribution of students according to classes was as follows:—

Agriculture		Home Economics	
First Year	60	First Year	26
Second Year	32	Second Year	20
Two-in-One	28	Two-in-One	9
	120		55
			175

The number of new students receiving training benefits from the Department of Veterans' Affairs, because of military service, was much reduced as compared with 1946, there being only one woman and five men. Twelve Second Year students continued to receive training benefits. Present regulations indicate that no such benefits will be paid to ex-service personnel applying after December 31st, 1947. Consequently, there will be few, if any, students applying for admission in 1948 because of encouragement given by the opportunity to have expenses paid by the Department of Veterans' Affairs.

Time-table arrangements and the organization of the outlines for various subjects include two noteworthy innovations. The Two-in-One Courses in both Agriculture and Home Economics are being presented throughout as separate courses. In former years students in the Two-in-One classes "sat in" along with students in either the First Year or Second Year courses, studying whatever subjects or parts of subjects the time-table would permit. However, the time-table has now been so arranged that except for the omission of English and Mathematics, the Two-in-One classes are scheduled quite separately and the various subjects of the regular two-year courses are fully covered. Although the shorter duration of the courses requires that the material be somewhat consolidated and presented in an accelerated manner. With the larger enrolment that appears to be assured for the "Two-in-One" Courses, this arrangement is undoubtedly advantageous.

The Blacksmithing and Carpentry classes have been scheduled to permit three-hour shop periods in the afternoons for one-half the term in each of the First Year and Second Year courses rather than one and one-half hour periods for the full term. Thus, the same total amount of time is devoted to these subjects as in former years but the new arrangement is more popular with students and Instructors alike because more work can be accomplished in the longer periods and clothing suitable for these subjects does not have to be changed for a change of classes in mid-afternoon.

The possession of a sound motion picture projection machine made it possible to have regular showings of films of general interest each week. Good use of technical films was made in presenting specific subject matter of various courses. Films loaned by the National Film Board, the University of Alberta, the Departments of Health and Agriculture and by several of the machinery companies were highly appreciated.

The Teaching Staff:

Several replacements and changes in the instruction staff were made for the 1947-48 term. Miss Fay Rodney who resigned to accept a position in Edmonton was replaced as Cooking Instructress by Miss Doris Elford, B.Sc.; Mr. N. A. Chomyc was transferred to District Agriculturist work at Ryley and was replaced as Instructor in Field Husbandry by Thos. Kilduff, M.Sc., whose services were loaned temporarily by the Extension Service Branch. Mr. J. E. Hawker, B.A., B.Sc., continued as Instructor in Botany and Horticulture, but relinquished duties as Dean of the Men's Residence to assume the instruction work in Mathematics. Mr. L. Blades continued as Instructor in English and Entomology and assumed additional work in Community Organization and in Economics and Co-operation in exchange for the Mathematics formerly carried.

Mr. Donald R. Macpherson, B.Sc., was appointed Instructor in Dairying and Poultry Husbandry and is Dean of the Men's Residence. Although assistance given by the Dairy and Poultry Branches in loaning the services of specially trained fieldmen for instruction in these subjects during the past two years was appreciated, the appointment of Mr. Macpherson provided for required supervision in the Dormitory.

Mrs. Helen Casper, R.N., was appointed School Nurse and Instructress in Home Nursing.

No provision was made for instruction in Physical Training. This is a subject requiring special qualifications not commonly possessed by graduates in Agriculture. However, it is hoped that a solution to this problem will be found at an early date because Physical Training and the direction of various athletic activities at such a residential school merits considerable attention.

The School Farm:

Mr. J. L. Kerns, B.Sc., Instructor in Animal Husbandry, continued in charge of the Farm, where the primary objective is to provide livestock and livestock management studies for classroom purposes. A large part of the meat, eggs, milk, cream and vegetables required by the dormitory are produced on the farm, and students make special studies of the production practices being followed.

Mr. J. I. Stephen, who had been employed as herdsman, resigned in May, 1947. As a result, Mr. Kerns was required to devote a greater part of his attention to the details of the work on the farm. However, Mr. Robert Moore, a graduate of the School, was employed to fill the vacancy and other em-

ployees on the farm are gaining experience that will assist in the conduct of the farm work.

Purebred breeding herds of Yorkshire swine and Suffolk sheep are maintained on the farm, and the dairy herd includes registered Holsteins and Jerseys, several of which have qualified with very good production records. The dairy cows were bred by artificial insemination through facilities made available by the Breeding Station at Olds. This practice resulted in obtaining a number of excellent calves that will eventually be used for replacement purposes, but some difficulty was encountered in having the cows bred in proper season to freshen in time to meet the needs for fluid milk in the dormitory. Consequently, a Holstein bull, Daleford Monarch Little Joe, was obtained from Olds. Present plans are to use artificial breeding only to a limited extent for demonstration purposes and to obtain special blood lines.

The practice of buying commercial beef calves of good type and breed characters for use in judging and butchering classes was continued. Some purebred beef cattle of each of the principal breeds were borrowed from district breeders whose co-operation in providing classroom material was highly appreciated as breeding herds of beef cattle are not maintained at the school.

Several trips by classes in Animal Husbandry were made to purebred livestock farms in the Vermilion district, where judging classes were conducted and observations made of production and management practices.

The School Grounds and Buildings:

Considerable attention was given to the School grounds, orchard and field crops demonstration plots, which serve a valuable purpose in relation to the summer programme and the special events outlined above.

Good progress was made in improving the general appearance of the lawns, flower beds and ornamental plantings, but considerable additions to the planting of shrubs, establishing of perennial flower beds and rebuilding of the lawns have yet to be made.

A row of young spruce trees was planted along the north side of the main highway, and the ditch banks were seeded down to lawn grass.

Fire-blight destroyed most of the remaining trees in the old orchard, with the result that an entirely new orchard planting is planned for 1948.

The Plant Science Department of the University of Alberta and the Dominion Experimental Farm at Lacombe each established cereal crop test plots on spaces made available to them in the plot land area. Results of these tests are included in the official reports made by these institutions. Plans to extend and to further co-ordinate this type of work are being made with the object of increasing the value of crop tests by employing material and techniques that will allow the results to be used for comparison purposes with those obtained at other points.

Some plots for purely demonstrational, field day, and class-

room purposes were sown and very good yields of potatoes for use in the dormitory were obtained.

The work on the grounds and plots would be greatly facilitated if a small tractor were available for plowing, cultivating and general maintenance purposes.

The Department of Public Works conducted a programme of repairs and alterations which added considerably to the appearance and utility of the buildings on the School premises. The Blacksmith Shop, Dairy and five staff residences were stuccoed; the roof of the College Building was shingled and repaired; the interior of the Blacksmith Shop was painted; a permanent stage was constructed in the Gymnasium and a fume exhaust system was installed in the Mechanics Building. Several of the washrooms in the dormitory were repaired and some cement sidewalks were laid. Completion of a partition and decoration of the fourth floor of the College Building made two additional classrooms available for the Home Economics course. Repairing and painting of the farm buildings and corrals greatly improved their appearance and arrested further rapid deterioration which had resulted from years of neglect. However, work on none of these projects was commenced until mid-July and progress was very slow until late September, with the result that staff and students alike were greatly handicapped and inconvenienced when classes opened on October 21st.

Principal immediate requirements include completion of sidewalks, installing and repairing eavestroughing on various buildings, providing of an adequate farm implement shed, construction of a suitable root-house for vegetables, and installing a system of bells in various buildings to announce the beginning and ending of class periods. Some particular attention to the matter of fire protection should be given immediately and the installation of water and sewage services in connection with the town is to be done in 1948. Arrangements should be made to have these projects completed during the periods of the Spring and Fall when regular courses or special events are not in progress.

REPORT OF THE SUPERVISOR OF JUNIOR ACTIVITIES AND YOUTH TRAINING

(G. S. BLACK)

The past year has been a very successful Junior Club one. In the majority of projects, there was both an increase in the number of clubs and in the total membership. Beef Feeding Clubs continue to be the most popular; Dairy and Barley Clubs have increased. Swine, Poultry and Oat Clubs are not as popular at the present time. Keen interest is being shown in the formation of Beef Breeding Clubs.

Revision of Beef Feeding, Beef Breeding and Swine Club Regulations were approved by the Junior Advisory Council and are now in operation. Some opposition to the new method of judging and pro-rating of moneys was expressed, but the majority feel it is a step in the right direction.

An increase is noted in the number of club rallies, visits by club members to Universities, Schools of Agriculture, and better farms within the province. Junior Farm Week at both our Schools was well attended, and a Club Leaders' Conference at both Vermilion and Olds has received much favorable comment.

Achievement Days were well attended in both Grain and Livestock. Buyers paid good prices for club calves, and exhibits by Juniors at Toronto in the National Contest at the Royal Winter Fair took the first eight places—a perfect score.

Junior teams in five projects represented Alberta in the club contests at the Royal Winter Fair, and made a good showing, winning one first, one second, a fourth, fifth and a seventh.

An interchange of club members between Montana and Alberta took place and made a very good impression and should do much to improve club relations between U.S.A. 4-H Clubs and our Junior set-up.

The Canadian Council held its annual meeting in Winnipeg during the month of March, and I was able to be present. A good meeting was held and plans were made for further advancement of Junior Club work in Canada.

Mr. W. C. Gordon assisted me during the summer months prior to being posted to Ponoka as a District Agriculturist, and his work was appreciated very highly.

The following is an analysis of each project:

ALBERTA'S JUNIOR CLUBS 1947		
	No. of Clubs	Membership
Beef	73	1,512
Dairy	18	377
Swine	3	37
Poultry	3	30
Wheat	42	659
Oat	17	284
Barley	26	551
Forage	15	171
Potato	2	36
Clothing	52	714
Garden	30	408
Home Decorating	3	47
Food	5	55
Total	<u>289</u>	<u>4,881</u>

DEPARTMENT OF AGRICULTURE

ALBERTA JUNIOR CLUBS										
Project	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
Swine	24	30	30	22	21	12	12	7	1	3
Beef	11	22	26	27	38	37	42	47	56	73
Dairy	10	10	12	9	10	10	11	15	14	18
Poultry .....	....	....	....	....	6	8	....	....	2	3
Wheat	71	74	78	54	40	23	19	21	34	42
Oat	15	23	18	21	22	30	26	19	24	17
Barley	8	7	8	8	33	30	26	15	16	26
Flax	1	1	2	1	....	2	....	....	....	....
Potato	2	....	1	2	....	3	3	2	8	2
Forage .....	....	....	....	....	....	13	19	14	10	15

BOYS' AND GIRLS' CLUBS—1930-47

Year	Total of Grain Clubs	Total of Members	Total Livestock Clubs	Total Members	Girls' Clubs	Prov. Member- ship	Dom. Member- ship
1930	47	706	40	580	....	1,286	21,142
1931	73	1,097	45	980	....	2,077	21,430
1932	117	1,583	67	1,260	....	3,843	23,430
1933	109	1,481	79	1,440	....	2,921	26,700
1934	130	1,993	66	1,223	....	3,216	30,282
1935	92	1,576	58	1,107	....	2,683	33,538
1936	84	1,268	45	924	....	2,192	35,141
1937	97	1,732	45	1,152	....	2,884	37,254
1938	105	1,663	62	1,421	....	3,054	45,314
1939	197	1,548	68	1,506	....	3,346	47,047
1940	86	1,312	58	1,164	....	2,476	39,566
1941	95	1,665	75	1,417	....	3,082	37,922
1942	101	1,734	68	1,449	....	3,183	36,252
1943	94	1,513	75	1,458	70- 981	3,982	34,392
1944	71	1,199	74	1,476	91-1461	4,136	35,280
1945	92	1,502	73	1,489	95-1329	4,320	38,475
1946	99	1,665	97	1,956	90-1263	4,884	41,000

Beef Calf Clubs.

The Alberta Beef Calf Feeding project has again proved very popular. This is evident in the increase in the number of clubs from fifty-six in 1946 to seventy-three in 1947. With a greater demand for beef and beef products, club members again received handsome prices for their calves. Interest and enthusiasm reached a high peak and very keen support was given, evidenced by the attendance at all Achievement Days. The quality of calves exhibited is improving, the average being higher. However, a few clubs can be criticized for having too many unfinished animals exhibited, and all exhibits would look better if three to six bottom placings were not present. Buyers desire high dressing percentage of good quality beef regardless of the price bid. Members by participating in Junior Beef Clubs learn the fundamentals of beef production, how to feed and manage a beef calf and the mechanics of conducting a meeting, as well as how to co-operate and work with other young farmers. Under the present method of selling of their livestock, a high percentage of top-grade animals shown ensures future attendance of buyers, and continues to popularize this project. Inferior or under-finished animals can undo years of effort in this connection. A complete report of average prices received at these club auction sales is given for your consideration following the next paragraph.

This year a schedule of Achievement Day Fairs was made with a view of allowing one man to do the bulk of the judging. The main purpose was to have uniformity across the province and to instil confidence in the buying trade. Mr. W. H. Lyons, formerly of Burns & Company Limited, Edmonton, did this difficult task in a very commendable way, and at each fair gave a demonstration of group judging.

The following is the statistical picture of the Junior Beef Feeding Clubs in 1947:

Average price of all calves sold by Junior Beef Club members	
in Alberta in 1947	.21¢
High Club Average	.30¢
Low Club Average	.16¢
Total pounds of Beef Live Weight produced	1,292,752
Average Market Price	.17¢

Dairy Calf Clubs.

Dairy Calf Clubs have increased from fourteen in 1946 to eighteen, completing the year's work in 1947. These new clubs were organized at Barrhead, Ryley, Lac Bellevue and Betchton. In addition, new clubs have just completed being organized at East Edmonton, Holden and Sedgewick. Thus, twenty-two Dairy Clubs will start their work in 1948, which is a marked increase during the past year. This is due in a large measure to the increased supply of calves secured from the Edmonton Milk Shed. Not only were members of this Association written to, but in many cases were personally canvassed by Mr. Ray Dixon, of the Dairy Branch.

This year a Provincial Junior Dairy Calf Club Contest was held at Red Deer. The Alberta Dairymen's Association assisted materially by paying the travelling expenses of the members and the trucking of their livestock to the Exhibition. This exhibit was one of the highlights of the show, over 500 young people as well as old watching the event. Junior Club members in uniforms made a grand display as they showed their calves like professionals. Nine animals faced the judge, Mr. R. Ness, of Vancouver, in the Calf class and eight in the Yearling class. Miss Kay Richards, of the Red Deer Dairy Club, and Miss Dorothy S. Anderson, of the Springbank Dairy Club, were the winners in the Calf and Yearling classes respectively. This was the first provincial junior show and had much to merit it. It enables members from all Dairy Calf Clubs to compare their livestock with other members' exhibits and at the same time receive training and instruction in judging classes for a period of three days. The Red Deer Exhibition Association are to be complimented in their efforts to make this part of their fair a success.

The following are the Junior Dairy Clubs and their membership:

Club	Membership	Club	Membership
Andrew	38	Olds	19
Barrhead	23	Red Deer	28 (2)
Bearspaw	18	Rosalind	15
Betchton	14	Ryley	22
Bowden	31	Sedgewick	20
Didsbury	21	Smoky Lake	22
East Edmonton	21	Springbank	16
Elnora	22	Sundre	11
Holden	22	Vilna	29
Lac Bellevue	17	Wostok	19
Lethbridge	13		

One member from each Junior Dairy Calf Club attended the Dairymen's Association Convention at Calgary as guests of this association. A programme of livestock judging was held, and Miss Nancy Tullick, of the Andrew Dairy Club, was the successful winner. Mr. Eric Longeway, a member of the Springbank Dairy Club, told of his trip to the Royal Winter Fair, and the visiting members expressed their thanks for being guests of the Alberta Dairymen's Association.

Swine Clubs.

Despite the compiling of new regulations for Junior Swine Clubs, this project is decidedly unpopular: And where once thirty clubs operated, only three are in existence today. General dissatisfaction continues in farming communities today over the removal of price controls on coarse grains and communities are not interested in forming Swine Clubs. Actually the marketings of hogs justify more Junior Swine Clubs, but unless a community is enthusiastic over a club project, it little behooves the attempted organization and operation of same. No team represented this province in the swine project at the National Contests at Toronto as insufficient clubs were in operation within the province to comply with Dominion regulations in this respect.

Poultry Clubs.

Junior Poultry Clubs' activity continues at a low ebb. Despite much encouragement from the Poultry Branch, of the Department of Agriculture, sufficient interest is lacking. It is hoped that some new clubs will be organized this coming year, despite adverse grain prices.

Crop Clubs.

The supervision of Crop Clubs' activity is established at headquarters at Edmonton. The Field Crops Branch have ably assisted in this work, particularly in the selection of samples for Achievement Days, ordering of seed grain and in holding of the Provincial Junior Seed Fair. The size and scale of this work amply justifies a full-time man engaged in Junior Grain activities. District Agriculturists assisted in the judging of the numerous Junior Seed Fairs and club members' plots. Mr. W. C. Gordon assisted me greatly in this work.

A survey of the following table will show that Wheat Clubs continue to increase and that Oat Clubs are declining. Malting Barley Clubs made a decided increase, and those members have in many cases found it a very profitable venture. Montcalm barley was grown in all of the Malting Clubs. Feed barley clubs have declined and Olli barley clubs are continuing to increase, particularly in areas subject to frost or where quick growing varieties are being used to combat wild oats.

Clubs	YEAR				
	1939	1944	1945	1946	1947
Wheat	74	19	21	34	42
Oat	23	26	19	24	17
Malting Barley	7	9	8	1	12
Feed Barley .....	....	17	7	11	7
Olli Barley .....	....	....	....	4	7
Potato .....	....	3	2	8	2
Forage .....	....	19	14	10	15

Seed supplies distributed to both organized and new clubs were as follows: Wheat, 1,540 bushels; Oats, 1,302 bushels; Barley, 268 bushels; Malting Barley, 1,160 bushels, and Forage, 3,054 pounds.

The following firms again sponsored Junior Grain Clubs and their assistance, financial and otherwise, was appreciated very much:

Alberta Wheat Pool—Wheat and Forage Clubs.
 United Grain Growers—Oat Clubs.
 Canada Malting—Montcalm Barley Clubs
 and Olli Barley Clubs.
 Line Elevators Farm Service—Feed Barley.

To give an idea of the amount of grain being produced annually by Junior Crop Clubs, the following break-down is reported for 1947. Estimated yield for wheat were thirty-five bushels, oats eighty bushels, and barley thirty-five bushels, which could be considered a low average.

Variety Grown	Clubs	Members	Acres	Estimated Yield
WHEAT				
Thatcher	21	337	1236.5	37,095 bu.
Red Bobs	14	194	679	20,370 bu.
Marquis	7	112	391	11,730 bu.
OATS				
Larain	5	83	332	26,560 bu.
Ajax	3	44	176	14,080 bu.
Eagle	1	21	84	6,720 bu.
Victory	8	135	540	43,200 bu.
BARLEY				
Olli	7	115	4025	12,075 bu.
Feed	7	104	364	10,920 bu.
Montcalm	12	186	651	19,530 bu.

Standing Crop Competitions.

Standing Crop Competitions, as previously stated, were judged by District Agriculturists on an interchange basis—small prizes are awarded the first and second placings in each club. Inspection reports show that in most cases careful attention was being given to the growing of these plots. It is hoped to add further incentive to this phase of the club activities by the issuing of a Club Diploma to the member of each club having the best plot of grain.

Achievement Days.

This year proved a very trying one, not only for Junior Club members, but for headquarters, in trying to arrange schedules for Achievement Days. Intermittent rainfall necessitated the frequent changing of fair dates and in turn was reflected in off-colored samples being exhibited. Achievement Days of Grain Club members divide themselves into two classes—one in which attention is given to advertising—good arrangement of samples, a club theme, e.g. "Save the Soil", and a display which is credited to the district. A number of our Junior Clubs could be mentioned who have excelled themselves this year. On the other hand, many clubs have failed to sell this idea and grain samples in untidy sacks greet the judge of this type of fair. An opportunity for improvement exists in these Junior Club Achievement Days which could help members of the club and certainly attract the attention of the community.

Provincial Junior Seed Fair.

The Provincial Seed Fair was held at Calgary on January 23rd, 24th and 25th, 1947, and to say the least the Junior Club exhibits were the major part of the exhibit. A full report of this event will be found in the report of Mr. J. E. Birdsall, of the Field Crops Branch, which has been responsibly holding such exhibits for the past number of years. It is interesting

to note that senior students from the Olds School of Agriculture placed the awards in Junior classes. Their work was highly satisfactory and materially aided in this very important phase of the work.

Boys' and Girls' Camps.

The Boys' and Girls' Camps were held at the following fairs: Lloydminster, Vermilion, Vegreville, Red Deer, Camrose and Lethbridge. Assistance was given to the District Agriculturist by Fair Boards, Fieldmen of sponsoring organizations, and by Service Clubs in each community. In addition, the staff of the School of Agriculture made possible the large turnout at Vermilion, at which place the School is used to house the members attending:

Place	Boys	Girls	Total
Lloydminster.....	Under supervision	Saskatchewan	
	Department of Agriculture		
Vermilion	55	64	119
Vegreville	27	30	57
Red Deer	40	29	69
Camrose .....	....	....	82
Lethbridge .....	....	....	50

Junior Farm Field Days and Club Rallies.

There is a growing desire during the summer months of each year to have Junior Club gathering of one or two days' duration at which club members from the adjacent districts attend. These rallies can be held very successfully at a number of places or lakes or camping grounds and are devoted to sports in the main. Other clubs are taking one day to have organized visits to Schools of Agriculture, Experimental Farms, or model farms in adjoining districts.

In addition, one district, namely Athabasca, held a summer short course combining lectures and demonstrations with sport activities for a full week. All of the above activities have much to merit them, indicating more interest in the Junior Club by making it more attractive to the young people. A total of seventeen rallies or field days have been reported during the past summer.

Interchange of Club Members.

During the summer at the Junior Club Week at Olds, four members of 4-H Clubs from the State of Montana were guests of Alberta Junior Clubs. This enabled a friendly discussion of club activities in the United States and in Canada, and much good occurred from this visit. A return visit was paid to the State 4-H Congress at Bozeman, Montana, by four selected club members and the club supervisors of this Province.

Junior Club Week.

The sixth annual Junior Club Week for proficiency winners was held at Vermilion during the week of July 14th-19th, and at Olds July 7th-12th, 1947. A trip of one week's duration at the Schools of Agriculture is awarded to the club member having the highest score in club work in each of the Junior Clubs within the province. Sponsors of the Grain Clubs assisted materially by paying the cost of transportation and board and room expenses of the members of the clubs they sponsor. Livestock Club mem-

bers' expenses are being borne by the Department of Agriculture. Twelve scholarships are awarded annually, each valued at \$75.00, to outstanding members at this Club Week. The following are the winners at the 1947 Junior Club Week:

Vermilion School: Livestock Clubs—Jim Falls,
Morinville, Alta.
Joe Melnyk,
Chipman, Alta.
Crop Clubs—Tony Yurkowski,
Hilliard, Alta.
Leonard Zazybida,
Hilliard, Alta.

Olds School: Livestock Clubs—Robert Bradshaw,
Innisfail, Alta.
Robert Boulton,
Lousana, Alta.
Crop Clubs—Phillip Redd,
Raymond, Alta.
Glen R. Olson,
Whitla, Alta.

This continues to be a red-letter event in club work. The competition is very keen among club members for the honour of winning this award. Carefully planned courses of study, coupled with organized play, make this a very interesting week for those attending. There is no question but such courses are later responsible for the excellent attendance of former club members enrolling in the regular school classes.

It is interesting to note that the following information gives the picture of the 1947 enrolment at both Olds and Vermilion Schools during the present college term:

Olds:	Total Enrolment of boys	131
	Past club members	43
	Total Enrolment of girls	61
	Past club members	5
Vermilion:	Total Enrolment of boys	120
	Past club members	44
	Total Enrolment of girls	55
	Past club members	13
	Percentage—29.4	

Winners of Inter-Club Plot Competitions:

WHEAT, Department of Agriculture Trophy—Castor Junior Wheat Club. OATS, Alberta Seed Growers' Association Trophy—Clive Junior Oat club. FEED BARLEY—Haight Junior Feed Barley Club. MALTING BARLEY—Stony Plain Junior Malting Barley Club. FORAGE CROP—Erskine Junior Forage Crop Club.

Winners of Inter-Club Seed Exhibits at Junior Seed Fair:

WHEAT, Alberta Wheat Pool Trophy—Wayne Junior Wheat Club. OATS—Northern Valley Junior Oat Club. FEED BARLEY—Abee Junior Feed Barley Club. MALTING BARLEY—Stony Plain Junior Malting Barley Club.

Winners of Awards at Junior Seed Fair for Individual Samples:

WHEAT, Alberta Wheat Pool Trophy—Eric Axelsen, Wayne, Wayne Junior Wheat Club. OATS, United Grain Growers' Trophy and Gold Watch—Lena Skaladan, Andrew Junior Oat Club. FEED BARLEY, Line Elevators' Association Gold Watch—Stanley Pawlowski, Vilna. MALTING BARLEY, Canada Malting Company Trophy and Gold Watch—Tillie Eluick, Hairy Hill.

Alberta Wheat Pool Shield for Wheat Club with highest General Efficiency Standing for 1946—Castor (Lauderdale) Junior Wheat Club.

Inter-Club Grain Judging Competition—Won by Phillip G. Redd, and John P. Redd, of the Raymond Junior Wheat Club.

Provincial Judging Competitions.

Provincial judging competitions were held to select judging teams to represent Alberta in the National Judging Competitions

conducted by the Canadian Council on Boys' and Girls' Club Work in Toronto at the time of the Royal Winter Fair. Semi-final contests at Edmonton and Olds and final contests at Edmonton on September 5th resulted in the following selections:

Kind	Name of Club	Winners	Coach
Beef Breeding	Innisfail	Bud McBride David Bradshaw	O. G. Bratvold, Red Deer, Alta.
Dairy	Bearspaw	Wm. Wearmouth David Black	C. G. Anderson, Calgary, Alta.
Seed Judging	Rockyford	Howard Roppel Harvey Katterhagen	R. J. Milligan, Strathmore, Alta.

The following teams which stood second in the final contests are awarded a trip to the School of Agriculture in July next for Junior Club Week:

Beef	.....	Bill Majelyka, Ponoka Vern Butterfield, Ponoka
Grain	.....	Robert Orr, Lacombe Allan Baker, Lacombe
Dairy	.....	Chas. Magnuson, Ryley George Knudslein, Ryley

National Contests.

Ninety Junior Club members competed in the National Judging Contests held by the Canadian Council on Boys' and Girls' Club Work during the Toronto Royal Winter Fair, November 18th to 26th. The number of teams competing in each of the judging contests were as follows: Dairy, 8; Beef, 8; Swine, 6; Poultry, 6; Grain, 4; Potato, 3; Clothing, 7; Food, 3. Teams from Alberta stood as follows:

Girls' Clubs—Food Project—1st (Bow Island Club)
Clothing Project—5th (Markerville Club)
Boys' Clubs—Beef Project—4th (Innisfail Club)
Dairy Project—7th (Bearspaw Club)
Grain Project—2nd (Rockyford Club)

Outstanding wins in the grand aggregate for high individual honours were:

Miss Lorraine Schatz, highest score in the Food Project, and

Mr. Howard Roppel, highest individual score in the Grain Project.

DOMINION CONTESTS ROYAL WINTER FAIR, TORONTO

1931 - 1947

GRAIN			BEEF	
Year	Club	Placing	Club	Placing
1931	Consort	1st		
1932	Willingdon	4th	Falher	4th
1933	Camrose	3rd	Tofield	2nd
1934	Alliance	5th	Lacombe	1st
1935	Grande Prairie	1st	Lacombe	1st
1936	Stettler	3rd	Red Deer	6th
1937	Wembley	1st	Edmonton	2nd
1938	Airdrie	2nd	Red Deer	2nd
1939	No Contests			
1940	Nanton	3rd	Cremona	2nd
1941	Drumheller	2nd	North Edmonton	1st
1942	Bon Accord	3rd	Innisfail	1st
1943	Vauxhall	1st	Innisfail	1st
1944	Bashaw	1st	North Edmonton	3rd
1945	Bon Accord	2nd	Wetaskiwin	2nd
1946	Raymond	4th	Nigger John	2nd
1947	Rockyford	2nd	Innisfail	4th
TOTAL PLACINGS—GRAIN			TOTAL PLACINGS—BEEF	
1st	.....	5 times	1st	 5 times
2nd	.....	4 times	2nd	 6 times
3rd	.....	4 times	3rd	 once
Others	.....	3 times	Others	 3 times

DAIRY			SWINE	
1931	Olds	7th	Wetaskiwin	3rd
1932	Olds	4th	Grande Prairie	4th
1933	Didsbury	6th	Liberty	3rd
1934	Olds	6th	Taber	5th
1935	Westmount	7th	Dina	1st
1936			Liberty	1st
1937			Liberty	1st
1938	Lethbridge	5th	Liberty	4th
Year	Club	Placing	Club	Placing
1939	No Contests			
1940	Camrose	5th	Liberty	1st
1941	Lethbridge	5th	Liberty	7th
1942	Didsbury	5th	Ferintosh	3rd
1943	Rosalind	5th	Liberty	2nd
1944	Rosalind	8th	Erskine	3rd
1945	Didsbury	7th	Bremner-Ft. Sask.	3rd
1946	Springbank	4th		
1947	Bearspaw	7th		
TOTAL PLACINGS—DAIRY			TOTAL PLACINGS—SWINE	
1st			1st	4 times
2nd			2nd	once
3rd			3rd	5 times
Others	14 times		Others	4 times

Dominion Junior Grain Exhibits.

Alberta made a perfect score in the Junior Wheat section at the Royal Winter Fair. In competition with other provinces, eight samples were exhibited and the top eight awards were won by Junior Alberta exhibits, which stood as follows:

1. Bernard Hendricks, Rockyford.
2. Raymond Hagel, Beiseker.
3. Lois Olson, Drumheller.
4. Harry Christiansen, Wayne.
5. John Rock, Drumheller.
6. Marjorie Leiske, Beiseker.
7. Howard Roppel, Rockyford.
8. Lloyd Halstead, Carbon.

REPORT OF RELIEF SETTLEMENT BRANCH

E. B. SWINDLEHURST, Acting Supervisor

To families in receipt of unemployment assistance, the operation of the Relief Settlement Plan during the depression years offered an opportunity of employment and independence.

After months of unemployment, there is a tendency either to blind submission or to violent antagonism to the prevailing state of affairs. Neither of these attitudes benefits society. Most men prefer to work with prospects of advancement, rather than to view a hopeless future with nothing but relief in sight.

As far as relief expenditures were concerned, the Settlement Plan offered a means of reduction; to the settler it offered independence and improved conditions. In the opinion of the Advisory Board, the second was perhaps the more important of the two. They realized that in opening the west, many had settled on the land with few possessions, and as a result of work and careful management had prospered to the extent of providing a home, healthful living conditions and a competence.

One of the earliest concepts of this plan as operated in Alberta was to encourage settlers to so arrange their affairs that they would be readily accepted in the communities they entered. The old western spirit was not dead. A newcomer to the district could usually be assured of the friendship and advice of at least some of the older residents. Then, too, these older residents required seasonal assistance with their farm operations and were often able to hire the newcomer in exchange for work, livestock or in some cases cash.

We are more likely to hear of those who prosper than of those who fail. Even in the ordinary course of events many who attempt to farm find themselves unfitted, or leave the land when more congenial work becomes available. Those taking advantage of assistance under the Settlement Plan were no exception. Some were unable to adapt themselves to rural life; others later found more attractive employment. Some remained on the farm but made little headway; others made a real contribution to their communities.

Among the original 1,092 families who received assistance, abandonments to date have totalled 668. Of these, 187 failed in their attempt at settlement and returned to the district of origin; 248 obtained other employment; 76 enlisted; and 157 left the farm as a result of various other causes. Of the remainder, 256 have made full payment of the recoverable portion of assistance offered, and another 61 have made partial payment of their indebtedness.

Total payments to date amount to \$81,847.25, of which \$12,751.67 was received in 1947. In addition to this amount, a total of \$85,801.98 has been recovered as a result of salvage of stock and equipment from settlers leaving the farm.

REPORT OF PROVINCIAL HORTICULTURAL STATION, BROOKS

P. D. HARGRAVE, Superintendent

INTRODUCTION

Investigation of specialized crops dominated the work of the Provincial Horticultural Station during the past year, primarily because of the conditions that gave the station the lightest fruit crop in its history. Processing of vegetable seed stocks progressed with graduate assistants made possible through a special Dominion Government grant. Pressure of urban development forced the release of further irrigable lands for sub-division and industrial development. Technically trained assistance was available during part of the year only because salaries offered at other institutions made similar positions more attractive. An increasing number of requests for assistance in horticulture field work was not adequate met. Travel through other horticultural centres permitted an evaluation of the progress being made in fruits and ornamentals.

The work at the station was carried on with 22,606 work hours. This represents a decrease in work hours over that used in 1946, but the total cost per hour of labour was such that the labour charge was \$2,667.00 greater in 1947. Labour requirements for irrigation were particularly heavy during July and August. The wet cool June developed luxurious growth, which drained the available moisture very rapidly. The hot weather and continuous irrigation was particularly noticeable in its effect on row crops. Potato grades, as a result of the late or infrequent irrigation, will not be good. Harvesting of potato crops on the station and in the surrounding district was made difficult by frequent rains in September and October and by the lack of frosts. For the most part, potato tops, which were very rank, remained green, resulting in unsatisfactory ripening of the tubers. The new potato combine constructed at the station proved most successful. Potato combines are overcoming, in part, the labour problem of the potato harvest.

Tuber indexing work conducted in the greenhouse, for the first time on an extensive scale, permitted the introduction of this method of stock maintenance to four potato growers. Three of these growers made very satisfactory progress and will continue this policy for maintenance of their seed.

CLIMATE

The winter of 1946-47 has been compared with those of 1906 and 1919, which were of long duration, with heavy snows and extremely low temperatures. This past winter was similar in many respects, although temperatures did not fall as low and severe blizzard conditions were farther east. Snow which fell on November 18th remained until spring and was gradually increased to a depth of 1½ feet on the level. Short periods of warm

weather crusted the snow and caused icing conditions on the ground underneath. The latter part of March was warm, and April was dry with higher than normal temperatures. These warm spring conditions continued until May 27th, on the night of which a low of 29° was experienced, followed by a low of 25° on May 28th. These low temperatures would not have been injurious if they had not been of such long duration. On the second night temperatures had dropped below freezing by 11:00 p.m. and remained at this temperature well into the following morning. Following these low temperatures, June was cool, with an unusually high rainfall—5.42 inches. July was hot and dry, while August, although hot, was a month of heavier than normal precipitation. During this period 3.4 inches of rain fell. September and October were warm, pleasant months, with frequent showers followed by a snow on November 3rd, which remained on the ground. Chinook conditions during the last week of December settled the snow but did not completely remove it and icing conditions were again present in some locations.

The last killing frost of the spring occurred on May 28th, and the first killing frost of the fall on October 22nd, allowing a frost-free period of 147 days. This late fall extended the frost-free period by at least one month, resulting in a longer growing season than might have been expected with the late date of the last spring frost. The following table gives the high and low temperatures and the precipitation for the year.

TABLE 1.

Month	Maximum	Minimum	Average Maximum	Average Minimum	Precipitation
January	44	—30	24.1	6.9	.50
February	51	—33	18.8	1.4	1.15
March	56	—30	28.6	9.6	.88
April	82	14	56.6	30.7	.79
May	81	25	65.0	38.7	1.03
June	80	42	68.9	47.0	5.62
July	96	43	84.2	53.9	.06
August	96	40	74.3	50.1	3.44
September	88	32	63.5	47.3	2.21
October	78	22	59.4	34.1	.41
November	66	—12	34.1	13.9	.66
December	42	—4	28.2	12.0	.84

Total precipitation for 1947 17.59

FRUIT

The early spring following the long steady cold winter allowed fruit trees of all species to enter the spring with promise of the heaviest fruit crop ever experienced. Blossom was early, with the Aitken plum and *Prunus Tomentosa* blooming on May 1st and 3rd. This is 10 days earlier than the average blossom date. Plums were set and most of the apples had passed their peak of bloom when the heavy prolonged frost of May 28th and 29th destroyed all prospects of a fruit crop. Very few trees carried any fruit and those that did were for the most part hybrid plums and Koslo Morello cherries. Outstanding amongst the plums were Minn No. 89, Redwing, Opata, Emerald, Beaverlodge Nos. 1 and 2, and a number of seedling selections. Small fruits did not suffer from the late frost and better than normal crops resulted. There was a complete failure of the fruit crop at the Strathmore sub-station.

Fortunately, the severe frost, although killing blossoms and in many places damaging leaves and unfolding winter buds, did

not visibly injure the trees as it did in many parts of Central and North-eastern Alberta. The damage in many orchards was so severe in other parts of the province that whole trees require re-building. At the station the unbalance brought about by the lack of fruit caused abnormally heavy wood growth. This heavy growth will necessitate heavy pruning in order to restore the shape of the trees and the normal fruiting surface.

Six and one-half acres of young stock, to bring into fruiting, was lined out. This planting used the last of the arable acreage suitable for tree planting. Before the stock in the spring of 1948 can be set to the permanent seedling blocks, suitable land leveling and reorganization of the station's water supply system will be necessary.

Of particular interest to small fruit growers in the province was the opportunity afforded to set out a block of selected Colorado currants. The basic stock of these was obtained from the Bolinger farms at Gleichen, from stocks brought originally from Colorado. Many of these selections are large-berried, heavy fruiting strains of a currant which will be widely adapted to Alberta conditions. Two selections will be called Albol Black and Albol Yellow. Their most interesting characteristics are high resistance to currant fruit fly, drought resistance, and attractiveness as an ornamental shrub for foundation planting.

Selections of fruit sent out for test from this station during the past 10 years are now starting to prove themselves. This is particularly true amongst the apples as some have fire-blight resistance. Three of these selections are Brooks No. 4 (AL-14-B4), Brooks No. 8 (AL-10-A26), and Brooks No. 10 (AL-10-B16). The first of these is a Rosybloom crab, previously named Alred, which, although not as hardy as Brooks No. 6, has proved itself highly resistant to fire-blight. Brooks No. 8 is a small apple with very firm flesh and fair keeping characteristics. Brooks No. 10 is a large crabapple similar in most respects to the old Hyslop variety. Both of these latter varieties are hardy, rugged and apparently fire-blight resistant. Because of their good structural characters, the two varieties might be worthy of trial for top-working. One cherry-plum hybrid will also be named in the near future. This is Brooks No. 24 (AL-5-3-1). This fruit, similar in appearance to Opata, but with much firmer flesh and better skin, has proved itself highly adaptable in the Peace River district and is being propagated for distribution there.

CO-OPERATIVE TRIALS

During the past season the co-operative trials conducted jointly with other research organizations and commercial producers and manufacturers have added to the information required to solve their particular agricultural problems. These tests were carried on co-operatively with the Dominion Experimental Farms Service, Dominion Department of Plant Pathology, and with vegetable producers and canners.

SUGAR BEET TRIALS

The sugar beet trials, as reported last year, were again undertaken. The land used for this purpose during the past season

had been heavily manured the previous year and possibly did not allow the fertilizer applications to increase the yield or influence the sugar content. The yields were high. The results of the two years' work are summarized in Table No. 2. Four varieties were planted in replicated tests. One-half of each received 100 pounds of 11-48-0 per acre. They received the usual cultural practice and at harvest the yield and sucrose percentages were determined. The highest mean yield in 1946 was 14.6 tons per acre for variety No. 2. The second highest yielding variety was No. 1 and this is the only variety that had a comparative test this year, with yields of 14.2 tons and 19.9 tons respectively. In 1946 the percentage of sucrose ranged from 17.4 to 18.5 per cent and in 1947 from 15.8 to 17.3 per cent. The lower percentage sucrose in 1947 can be explained by the high moisture content of the beets. The lower 1947 percentages were more than compensated for by the increased tonnage.

TABLE 2.
SUGAR BEET FERTILIZER TEST—TONS PER ACRE

Variety	Fertilizer Treatment	Mean Yield		Mean Percentage of Sucrose	
		1946	1947	1946	1947
No. 1	Fertilizer	14.21	19.90	17.4	16.85
	None	13.37	19.84	17.5	17.10
No. 2	Fertilizer	14.60	.....	17.7	.....
	None	13.91	.....	17.4	.....
No. 3	Fertilizer	12.72	.....	18.3	.....
	None	10.94	.....	18.2	.....
No. 4	Fertilizer	11.54	.....	18.2	.....
	None	10.00	.....	18.5	.....
No. 5	Fertilizer	.....	16.48	.....	16.05
	None	.....	16.28	.....	15.80
No. 6	Fertilizer	.....	20.05	.....	16.85
	None	.....	19.99	.....	16.85
No. 7	Fertilizer	.....	20.26	.....	16.75
	None	.....	20.25	.....	17.30

CO-OPERATIVE TOMATO TRIALS

The commercial co-operative tomato trials carried out with the farmers of the district were confined to three fields and strains of the two varieties Bounty and Red Cloud. Due to the excellent ripening weather in August a good harvest was made of commercial fruit and afforded an opportunity of selecting outstanding early plants. As a result of these co-operative trials marked progress has been made in the strains now offered to the commercial grower. This is emphasized in the tomato varietal trials as conducted on the station grounds in which detailed information is gathered.

VEGETABLE VARIETAL TRIALS

The background of the work with vegetables during the past two years has been primarily the search for better freezer varieties, resulting in the use of a greater number of varieties in most of the planting blocks. During the past year 372 varieties of tomatoes, corn, beans, peas, peppers, broccoli, brussels sprouts, cabbage and cauliflower were included in the test. The varieties and strains were grown in replicated tests and under favorable weather conditions. The resultant information on peas, beans, corn and tomatoes has been made available in mimeographed summary form for those interested in the information. Outstanding tomato varieties from a yield standpoint were Redskin, Farthest North, B.V. No. 18 (Selected strain of Co-op 434 No. 3)

and a hybrid from the Morden Experimental Station—WO31 x Bounty F1. This latter variety is the only one of the high-yielding group other than Bounty and Red Cloud that has commercial possibilities. Farthest North, B.V. No. 18, and Redskin are definitely home garden varieties because of their smallness and shape. These varieties will, however, give a greater number of home gardeners the opportunity of growing ripe tomatoes. This will be a definite factor with the supply from the southern States limited because of import restrictions.

Corn selections were of interest to both the canner and the home gardener. Of interest to the corn grower of Central Alberta are the earliest ripening varieties of good quality. These, in order of their maturity, were Orchard Baby, Pickaninny, Seneca 60 and Banting. The first-mentioned variety, Orchard Baby, has a small delicious cob and because of its early maturity would be well adapted to Central Alberta.

All hybrid varieties of field corn proved later than the strains resulting from many years of selection on the prairies. The strains Assiniboine and Gehu ripened but were markedly more dwarf in habit than the earliest of the hybrids.

During the harvest of varieties for freezer tests, yields were recorded for bean varieties so that an indication of their ability to produce under irrigated conditions might be recorded. The leading varieties as to yield were Logan, 6 tons per acre; Masterpiece, 5.9 tons per acre; and Blue Lake, 5.3 tons per acre. Cabbage, cauliflower, brussels sprouts and broccoli were grown in preliminary tests and as a basis for processing trials. Green and purple sprouting broccoli were outstanding in their field results, but none of the heading broccoli varieties were found satisfactory.

VEGETABLE SEED PROCESSING

Strains of 17 vegetable varieties were allocated to the station by the C.S.G.A. Vegetable Committee in 1945 for processing as Foundation seed stock. During the past year selected lines from within strains were available for planting, roguing and re-selection. This has permitted the indexing and classification of some of the varieties and these will be placed in the merit trials during the coming season. The greenhouse has been used for speeding the work with cabbage and radish strains during the winter months. A Dominion government grant permitted employing an undergraduate assistant to carry out these tests.

POTATO FERTILIZER AND VARIETAL TESTS

Two fertilizer tests have been laid down for potatoes, one of which is based on a crop rotation basis. The results of the latter work was set back a year due to the severe winter killing of the alfalfa in the rotation after the icing conditions of the past winter.

Original fertilizer work with potatoes has now had five years of data accumulated. This is set out in table No. 3. From a study of the table it is realized that phosphorous, nitrogen and manure all play a definite part in increasing the yield of this crop. Small quantities of nitrogen are required to supplement the phosphorous which is the most important element in increasing yields. When

manure is applied, the addition of a nitrogen phosphate fertilizer is apparently necessary to reap the full benefit in crop returns.

TABLE 3.
POTATO FERTILIZER TESTS

Fertilizer	Lbs. per Acre	Yields Calculated in bushels per acre					Av. Yield of 4 Years
		1943	1944	1945	1946	1947	
Check		180.3	384.0	296.9	378.7	297.7	307.5
Triple	150	217.4	335.5	292.1	389.3	305.0	307.9
11-48	119	196.0	434.4	358.3	385.3	322.1	339.2
11-48	238	173.4	392.2	323.2	385.6	332.5	321.4
2-19	294	x179.6	x332.2	333.4	417.1	310.5	314.6
Nitraprills	82	.....	.....	323.6	371.2	319.3	.....
Manure	20 Tons	201.5	395.0	305.4	426.7	319.3	329.5
Manure and Triple	150	183.8	414.5	311.9	427.5	339.0	335.3
Manure and 11-48	119	199.4	444.1	334.4	415.2	316.1	341.8
Average		191.4	391.4	319.9	399.6	318.33	326.1

X=2---20 at 285 lbs. per acre.

In the potato varietal tests Carter's Early Favourite has been the top yielding variety in two of the three years. The variety White Rose, which was included in the test for the first time this year, led in yielding ability. It was followed by Columbia Russett, and Lacombe No. 5. The commonly grown commercial varieties, Netted Gems and Irish Cobbler, were well down the list in yielding ability, although the latter placed in the first ten. The introduced variety, Menominee, which has been recognized in the United States as scab resistant, proved promising and will be given further study. The indications from this trial are that a greater effort should be made to introduce to the potato growing industry a netted potato similar to the Netted Gem but with a higher yielding ability.

HOPS

The trial hop yard, established to investigate the feasibility of growing this highly specialized crop, again proved most promising. The plants all came through the winter without killing. This was particularly encouraging after the conditions prevailing during the dormant season which destroyed so many other perennial crops. The late frost of May damaged the early vines but recovery was rapid and a very satisfactory crop was harvested. Preliminary arrangements have been made to construct a drier at the station so that cones can be properly cured for test by the brewing industry. The hop yard was visited during the early winter months by representatives from Washington and British Columbia. They were favourably impressed with the possibility of growing hops, but were somewhat critical of climatic hazards, particularly our short season, hail and wind risks. The crop, however, was judged of high quality and of such that would readily find a market.

TOBACCO TRIALS

Tobacco plantings were again established at the station so that work undertaken in the previous year might be further studied. At the time of the establishing of the planting it had been hoped that facilities could be made available for curing the crop. The tobacco gave a very satisfactory showing in the field and reached maturity well within the frost-free period. Trial samples from the replicated blocks were harvested and an attempt made to cure them in accommodation loaned to us by

the pheasant hatchery. It was found that temperature and humidity control was not adequate to finish a first-class product. However, the color and texture of the baled tobacco was much improved over that of the previous season.

PROPAGATION

For the past three years fruit crops have not been harvested on the prairies, due mainly to late spring frosts. This has limited the amount of seed and resulted in a shortage of propagating stocks. Unfortunately, the demand for fruit trees has never been greater and the supply shorter. Every effort is being made to overcome this. During the past season 1,400 plants were lined out for budding or grafting during 1948 and everything suitable for budding or grafting in the current year was worked. This will again give us stock for assisting the nurseries, carrying out our demonstration orchard work, and encouraging the planting of the newer varieties for farm orchards.

Projects for girls' clubs were again supplied with shrubs. Requests for propagating stocks were filled, insofar as the material was available, and assistance in supplying shelterbelt stocks, particularly in the area adjacent to the station, was given. The demand for poplar and willow cuttings and for evergreen planting stocks was heavier than at any time in the station's history. The indications are that it will be as great again in the spring of 1948. During the past season bridge grafting of trees, due to rodent damage, was necessary for the first time. The injured trees are apparently recovering as a result of this work.

FROZEN FOODS

Testing of frozen food and variety classification as to suitability for processing has increased in volume each year. During the winter months of 1947 a scoring panel of technical assistants carried on the classification for the first time at the station. The results of this work were presented to the freezing industry at their convention and were published in the May and August issues of "Locker Plants and Frozen Foods" under the heading "Freeze It and Be Satisfied". These articles reported the findings on 178 varieties of vegetables and six fruit varieties. The highest scoring fruits and vegetables were as follows:

Green Beans	Wax Beans
Asgrow Stringless Green Pod	Dwarf Bush Wax
Bush Tendergreen	Pencil Pod Black Wax
Peas	Pole Beans
Laxton's Progress	Blue Lake
Little Marvel	Kentucky Wonder
Corn on the Cob	Kernel Corn
Burbank Golden Bantam	Burbank Golden Bantam
Gold Ban	Iona
Peppers	
Burpee Sunnybrook	
Large Bell	

MacDonald was found to be the most favoured of the rhubarb varieties.

To conduct more efficiently the work at the station, a quick-freezer plant was established in the basement of the laboratory. This plant was used for processing peas, beans, corn, peppers, broccoli, cauliflower and brussels sprouts. Small quantities of

other vegetables and combination packs were also processed to act as a guide in next year's program.

EXTENSION

The Station Staff has endeavored to meet as many requests as possible for horticultural information and to attend meetings where horticultural speakers have been requested. Assistance at short courses, field days, horticultural shows, Junior Club work took members of the staff to 39 meetings during the year. This equalled the number of meetings attended in previous years, but failed to meet all requests for assistance. Additional personnel is needed to make the extension work of the station fully effective. During the summer months there were eight organized field days and picnics on the station grounds and the laboratory office was used by agricultural organizations in the community for frequent meetings. Horticultural correspondence is made more difficult to handle due to the shortage of horticultural publications for supplying the information.

DEMONSTRATION ORCHARDS

It was possible to supplement the plantings of a number of demonstration orchards and to supply planting stocks for five more. These plantings were established in new territories.

FARMSTEAD PLANNING

The demands for assistance in farmstead planning have been greater than usual, and it is hoped that some progress in meeting these requests can be made in the near future.

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DATE DUE SLIP

APR 30 '83	DUE CAM DEC 24 '91
APR 29 RETURN	JAN 08 RETURN
DUE CAM MAY 31 '90	DUE CAM FEB 14 1992
DUE CAM JUL 09 1990	DUE CAM MAR 28 '92
JUL 10 RETURN	DUE CAM MAY 09 1992
DUE CAM AUG 21 '90	DUE CAM JUN 17 1992
DUE CAM OCT 02 '90	DUE CAM AUG 11 1992
SEP 19 RETURN	DUE CAM OCT 14 1992
DUE CAM JUL 03 '91	DUE CAM OCT 18 RETURN
DUE CAM AUG 14 1991	
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